S. HRG. 99-1031

LYMAN-JONES AND WEST RIVER RURAL WATER DEVELOPMENT PROJECTS

HEARING

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

S. 1471

A BILL TO AUTHORIZE THE LYMAN JONES AND WEST RIVER RURAL WATER DEVELOPMENT PROJECTS

KADOKA, SD, AUGUST 25, 1986

Printed for the use of the
Committee on Energy and Natural Resources

U.S. GOVERNMENT PRINTING OFFICE

68-807 WASHINGTON : 1987

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

S311-23

COMMITTEE ON ENERGY AND NATURAL RESOURCES

JAMES A. McCLURE, Idaho, *Chairman*

MARK O. HATFIELD, Oregon
LOWELL P. WEICKER, JR., Connecticut
PETE V. DOMENICI, New Mexico
MALCOLM WALLOP, Wyoming
JOHN W. WARNER, Virginia
FRANK H. MURKOWSKI, Alaska
DON NICKLES, Oklahoma
CHIC HECHT, Nevada
DANIEL J. EVANS, Washington

J. BENNETT JOHNSTON, Louisiana
DALE BUMPERS, Arkansas
WENDELL H. FORD, Kentucky
HOWARD M. METZENBAUM, Ohio
JOHN MELCHER, Montana
BILL BRADLEY, New Jersey
JEFF BINGAMAN, New Mexico
JOHN D. ROCKEFELLER IV, West Virginia

FRANK M. CUSHING, *Staff Director*
GARY G. ELLSWORTH, *Chief Counsel*
D. MICHAEL HARVEY, *Chief Counsel for the Minority*

SUBCOMMITTEE ON WATER AND POWER

FRANK H. MURKOWSKI, Alaska, *Chairman*

MARK O. HATFIELD, Oregon
DANIEL J. EVANS, Washington
DON NICKLES, Oklahoma
LOWELL P. WEICKER, JR., Connecticut

BILL BRADLEY, New Jersey
WENDELL H. FORD, Kentucky
HOWARD M. METZENBAUM, Ohio
JOHN MELCHER, Montana

JAMES A. McCLURE and J. BENNETT JOHNSTON are Ex Officio Members of the Subcommittee

RUSSELL R. BROWN, *Professional Staff Member*

CONTENTS

	Page
S. 1471	3

STATEMENTS

Abdnor, Hon. James, a U.S. Senator from the State of South Dakota	5
Daschle, Hon. Tom, a U.S. Representative from the State of South Dakota, as presented by Patrick Howey, West River field representative	16
Daums, Johnny, former board member, West River Conservancy Subdistrict	67
Davis, Dennis, executive director, South Dakota Association of Rural Water Systems	40
Gabriel, Hon. Larry E., South Dakota State Legislature	33
Halligan, Ken, rancher, Draper, SD	58
Hieb, Don, constable, Murdo, SD	54
Hieb, Joe, board of directors, West River Water Development District and Lyman-Jones Water Development Association	28
Hogen, Marvis, Secretary, Department of Agriculture, State of South Dakota	24
Jensen, Paul, rancher, Wall, SD	68
Martin, Bill, Regional Director, Missouri Basin, Bureau of Reclamation, Department of the Interior; accompanied by John Lawson, senior project leader	21
McCulloh, Jack, executive director, South Dakota Stockgrowers Association	43
McManus, Ron, president, Town Board, Reliance, SD	54
Means, Frank, tribal counsel and chairman, Economic Development Commission, Oglala Sioux Tribe	43
Miller, Robert, executive director, South Dakota Municipal League	44
Miner, Hon. Doris, South Dakota State Senator	32
Moore, Raymond, Mayor, Kennebec, SD	30
Nemec, Jerry, Mayor, Midland, SD	55
Porch, Hon. Roger, South Dakota State Legislature	37
Pressler, Hon. Larry, a U.S. Senator from the State of South Dakota, as presented by Darrell Sawyer, field representative	11
Raymond, Thomas E., Mayor, Kadoka, SD	46
Reed, Steve, manager, West Central Electric Cooperative	45
Renning, George, president, West River Water System and director, West River Water Development District	29
Rhodes, Jerry, former manager, West River Conservancy Subdistrict	67
Rose, Houston, rancher, Hayes, SD	63
Sieh, Hon. Harold, South Dakota State Legislature	33
Tollefson, Gaye, executive director, South Dakota Water Congress	42
Wallop, Hon. Malcolm, a U.S. Senator from the State of Wyoming	1
West, Mike, Mayor, Philip, SD	53

APPENDIX

Additional material submitted for the record	75

LYMAN-JONES AND WEST RIVER RURAL WATER DEVELOPMENT PROJECTS

MONDAY, AUGUST 25, 1986

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Kadoka, SD.

The subcommittee met, pursuant to notice, at 2 p.m., in the Kadoka City Hall Annex, Kadoka, SD, Hon. Malcolm Wallop presiding.

Present: Senators Wallop and Abdnor.

Also present: Russell R. Brown, professional staff member; and William B. Conway, counsel for the minority.

OPENING STATEMENT OF HON. MALCOLM WALLOP, A U.S. SENATOR FROM THE STATE OF WYOMING

Senator WALLOP. We want to wish everybody a good afternoon. There is a pretty nice little shower going on west of here at least, and I noticed that most of the reservoirs are full and the country looks pretty good. It is kind of nice for some of us from Wyoming to see a full reservoir. We have not had quite as much generosity as you have had.

The hearing this afternoon before the Subcommittee on Water and Power, Senate Committee on Energy and Natural Resources is to take testimony on Senate Bill 1471 which was introduced by Senators Pressler and Abdnor.

Everyone in here knows the bill would authorize the appropriation of $50 million to the Secretary of Interior for the study and construction of the Lyman-Jones and West River Rural Water Development Projects here in Central South Dakota.

Without objection, I will place a copy of S. 1471 into the hearing record at the conclusion of my remarks.

Before we call our first witness, there are some housekeeping chores that we need to take care of. In the back of the room, I think over right at the door, is a sign-up list for any and all of you who would like to receive a copy of the hearing record when it is printed.

Also on the witness table there are address cards. I would ask that everyone who testifies today please fill out one of those cards and either leave it on the table or give it to a member of the staff.

Finally, I would note that our time this afternoon is limited. I am sorry about that, but I have to return to my State of Wyoming and Jim has things to do. We will have to be leaving here about

4:00 o'clock. In an effort to accommodate everybody who wishes to testify, I would ask you to summarize any written statements. It would be appreciated, I am sure, by those who come later in the day that they might have a chance to be heard orally as well.

The hearing record will remain open for two weeks for those who may wish to submit additional materials for the record. Anything that you think would be of use and interest to the committee in making its decision, we would appreciate having it.

The first witness this afternoon is my friend and my colleague and the co-sponsor of this bill, your Senator Abdnor, Jim Abdnor.

[The text of S. 1471 follows:]

II

99TH CONGRESS
1ST SESSION

S. 1471

To authorize the Lyman Jones and West River Rural Water Development Projects.

IN THE SENATE OF THE UNITED STATES

JULY 18 (legislative day, JULY 16), 1985

Mr. PRESSLER (for himself and Mr. ABDNOR) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To authorize the Lyman Jones and West River Rural Water Development Projects.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) there are authorized to be appropriated to the Secretary of the Interior for the fiscal year ending September 30, 1986, $50,000,000, which shall be used for initial planning and construction of a rural water treatment and distribution system in Stanley, Haakon, Lyman, and Jones Counties of South Dakota as identified and proposed in the Lyman-Jones and West River Rural Water System engineering reports that will furnish water for domestic and other purposes. The

projects shall be hereafter referred to in this Act as the "West River and Lyman Jones County Rural Water Development Projects".

(b) Any funds appropriated under this Act shall remain available until expended.

(c) The Secretary of Interior shall use any funds under subsection (b) for necessary administrative expenses, and to provide financial assistance to plan and develop the West River and Lyman Jones County Rural Water Development Projects under the terms and conditions of the Consolidated Farm and Rural Development Act and the rules and regulations promulgated by the Department of Agriculture under that Act, except to the extent such Act or rules or regulations promulgated thereunder are inconsistent with the provisions of this Act. Such funds shall be made available in a combination of grants and loans that will provide grants for not less than 75 per centum of eligible development costs and such loans as may be necessary to plan and construct the West River and Lyman Jones County Rural Water Development Projects.

(d) The provisions of this Act shall become effective October 1, 1985.

Senator ABDNOR. Thank you, Mr. Chairman.

Senator WALLOP. One thing. I am sorry, Jim, but I have a little note here, and I should have done it without the note, and that is to thank the City of Kadoka for the use of this facility, for the coffee and lemonade in the annex. After the hearing it will be out here. The City wants you all to feel welcome. They told me that it was made with water that did not come in some of the little jars I saw getting ready for the witness table today.

STATEMENT OF HON. JAMES ABDNOR, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator ABDNOR. Thank you, Mr. Chairman.

I am also very pleased to be here in Kadoka today. I do not get here as often as I would like to or should, but we do keep tied up in Washington 5 days and sometimes 6 days a week. So, I do not get around as well as I ought to. I apologize for that. But this gives me an opportunity today with this fine turn-out to see a great many of my long-time friends.

I am just pleased as can be that we are able to bring this hearing from Washington to here. I have always felt that if the people who serve on these committees and the staff can see the country, see the situation, talk to the people personally, they go away with a little different feeling about it, so I am pleased.

It does not happen many times that committees get out in the areas like this. I am just so grateful that Senator Wallop, my colleague from Wyoming, who is a very active member of the Energy and Natural Resources Committee would take time out of his schedule to come here to hold this hearing.

Senator Wallop is also chairman of the Senate Energy Subcommittee on Public Lands and Reserved Water and Resource Conservation, so he is recognized in that field as one of the nation's leading experts on western water and land issues. I have seen him take the floor many, many times on that subject because he feels so strongly about it. I am extremely happy that he was able to come here.

Also, you have known how I work with this fellow at the end of the table, Russ Brown. He is really a great guy. You would think I am a member of his committee, as much time as I spend harassing him.

I happen to be chairman of another water committee. I am Chairman of the Water Resources of the Environment and Public Works, and I have all the Corps projects. Maybe it is a good thing I do not have the Bureau Subcommittee or a lot of things would be coming out of there to South Dakota. Anyway, we are all wrapped up in water and I just know that this is going to be a good hearing.

When Senator Pressler and I proposed our legislation, of course we knew the problem very well. We also know that we have to depend on a series of local community water wells out here in the system which are very, very expensive. I have told Malcolm that more than once, especially to maintain. It is darn poor quality water to drink. I think I did see the sample bottles floating around in here today that you will probably see firsthand.

Our legislation would provide for a rural water system to move fresh water from the Missouri River to six western counties and 12 communities, but you guys know this better than I do. I am going to shut it off and get on with our witnesses. That is who we came to hear.

You know all about the bill. Senator Pressler would have liked to be here. With that, I will just put what I do have in the record and proceed with the witnesses.

[The prepared statement of Senator Abdnor follows:]

PREPARED STATEMENT OF SENATOR JAMES ABNOR

LYMAN-JONES AND WEST RIVER RURAL WATER PROJECT

GOOD AFTERNOON. WE ARE PLEASED TO BE HERE IN KADOKA, TODAY, TO RECEIVE TESTIMONY ON S. 1471, WHICH I JOINED IN SPONSORING WITH SENATOR LARRY PRESSLER.

I AM ALSO PLEASED THAT MY GOOD FRIEND AND COLLEAGUE, SENATOR MALCOLM WALLOP OF WYOMING IS HERE TO LEARN FIRST-HAND of the LOCAL SUPPORT WHICH EXISTS FOR THE LYMAN-JONES AND WEST RIVER RURAL WATER DEVELOPMENT PROJECT.

SENATOR WALLOP IS CHAIRMAN OF THE SENATE ENERGY SUBCOMMITTEE ON PUBLIC LANDS, RESERVED WATER AND RESOURCE CONSERVATION AND IS

RECOGNIZED AS ONE OF OUR NATION'S LEADING EXPERTS ON WESTERN WATER AND LAND ISSUES.

WE WELCOME THE OPPORTUNITY TO HAVE SENATOR WALLOP HERE AND APPRECIATE YOUR TAKING TIME IN YOUR BUSY WYOMING SCHEDULE TO COME TO SOUTH DAKOTA TODAY. WE ALSO WELCOME MR. RUSS BROWN OF THE SENATE ENERGY COMMITTEE AS WELL. I UNDERSTAND THAT OUR LOCAL PROJECT SUPPORTERS HAVE ALREADY GIVEN RUSS THE ONCE OVER. RUSS ARRIVED YESTERDAY AND I AM CERTAIN THAT WE HAVE MADE GREAT ADVANCES ON THE STAFF LEVEL AT ADVANCING THIS LEGISLATION. IT THAT CORRECT RUSS?

I AM PLEASED THAN I COULD BRING SENATOR WALLOP TO KADOKA SO THAT HE MIGHT HAVE THE OPPORTUNITY TO HEAR YOUR THOUGHTS ON THE NEED FOR THIS BILL, AND WHY WE BELIEVE THIS PROJECT SHOULD BE AUTHORIZED BY CONGRESS. AS A LIFE-LONG RESIDENT OF LYMAN COUNTY, MYSELF, I KNOW HOW IMPORTANT THIS PROJECT IS TO THIS AREA OF THE STATE AND HOW BADLY THIS PROJECT IS NEEDED.

WHAT SENATOR PRESSLER AND I PROPOSE TO DO WITH OUR LEGISLATION IS TO PROVIDE THE RESIDENTS OF THIS AREA OF THE STATE WITH A SAFE AND AMPLE SUPPLY OF WATER.

CURRENTLY, WE HAVE TO DEPEND ON A SERIES OF LOCAL COMMUNITY WATER WELLS AND SYSTEMS WHICH ARE EXPENSIVE TO DRILL, EXPENSIVE TO MAINTAIN, AND OF POOR WATER QUALITY.

OUR LEGISLATION WOULD PROVIDE FOR A RURAL WATER SYSTEM TO MOVE FRESH WATER FROM THE MISSOURI RIVER TO SIX WESTERN COUNTIES AND 12 COMMUNITIES. IN ADDITION IT WOULD ALSO PROVIDE FARMERS AND RANCHERS WITH ADEQUATE LIVESTOCK WATER NEEDS.

I BELIEVE THAT THE FEDERAL GOVERNMENT SHOULD FULFILL ITS COMMITMENTS TO SOUTH DAKOTA UNDER THE ORIGINAL PICK-SLOAN MISSOURI RIVER DEVELOPMENT PROGRAM. THE FEDERAL GOVERNMENT MADE A COMMITMENT TO THE PEOPLE OF SOUTH DAKOTA UNDER PICK-SLOAN AND

THEY SHOULD KEEP THAT COMMITMENT TO THE PEOPLE OF SOUTH DAKOTA BY PROVIDING FOR PROJECTS SUCH AS THIS ONE.

HAVING GROWN UP IN THIS AREA AND HAVING FARMED HERE MOST OF MY ADULT LIFE, I BELIEVE THAT WE SHOULD RECOGNIZE THE INADEQUATE AND UNSAFE WATER CONDITIONS WHICH EXIST HERE AND I URGE THE SENATE TO MOVE THIS LEGISLATION AS QUICKLY AS POSSIBLE.

THE HEARING WE ARE CONDUCTING TODAY IS A GOOD FIRST STEP IN THE PROCESS AND I WOULD LIKE TO EXPRESS MY APPRECIATION TO SENATOR WALLOP FOR TRAVELING TO KADOKA TO HEAR OUR CONCERNS AND TO ALL OF YOU GATHERED HERE, FOR PROVIDING A STRONG SHOW OF LOCAL SUPPORT FOR OUR LEGISLATION.

Senator WALLOP. Thank you.

The next witness is Mr. Darrell Sawyer who is the field representative of Senator Pressler.

STATEMENT OF HON. LARRY PRESSLER, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA, AS PRESENTED BY DARRELL SAWYER, FIELD REPRESENTATIVE

Mr. SAWYER. Mr. Chairman, on behalf of Senator Pressler, I would like to welcome you to South Dakota and thank you for taking the time to chair this important hearing. Senator Pressler would also like to thank the Committee Chairman——

Senator WALLOP. Can you hear in the back? Okay. Tell you what, just pull the microphone right out of that deal and speak into it.

Mr. SAWYER. Is this better? I will start over again.

Mr. Chairman, on behalf of Senator Pressler, I would like to welcome you to South Dakota and thank you for taking the time to chair this important hearing.

Senator Pressler would also like to thank the Committee Chairman, Senator Murkowski, for scheduling these hearings and being so helpful in moving this bill forward.

As we all know, the water in the Lyman-Jones and West River Rural Water Project area is of a very poor quality, and the deep wells are very expensive to drill and maintain. The poor water quality causes health problems for area residents and is a health hazard for the millions of tourists who travel through the area from year to year. The livestock industry in the area would also benefit greatly from good quality water.

Mr. Chairman, Senator Pressler has a more detailed statement which we have submitted for the record.

Again, thank you for coming to South Dakota to chair these hearings.

[The prepared statement of Senator Pressler follows:]

STATEMENT OF SENATOR LARRY PRESSLER

before the

Subcommittee on Water and Power

U.S. Senate Committee on Energy and Natural Resources

Field Hearings

August 25, 1986

As the sponsor of S. 1471, authorizing the Lyman-Jones and West River rural water project, I want to thank the committee for scheduling these important field hearings. I would also like to welcome Senator Wallop to South Dakota and thank him for taking the time to chair the hearing.

The Lyman-Jones and West River rural water project has strong local support. Several years ago during a public listening meeting I held in Chamberlain, South Dakota, Frank Woster, a director on the Lyman-Jones rural water project, talked to me about the poor quality of water in the area. Since that meeting, I have worked with Frank and the other residents of the area in drafting and introducing authorizing legislation.

The water quality in these communities is poor. The water contains dissolved solids in excess of the recommended EPA limit. In fact, most of the water supplies in the area would be considered brackish by EPA standards. The water in this area contains exceedingly high levels of sodium, sulfate, and iron which cause digestive problems in humans and livestock.

The water in this area is of such poor quality that it has created health problems for local residents. The water also causes problems for tourists traveling through the area. This is of particular concern since Interstate 90, the primary route to the Black Hills, travels through this area. I recently met with a resident of western South Dakota who had been required to take medication for high blood pressure for years. His doctor suggested he start buying his water for drinking and cooking. He did this, and as a result has been able to stop taking medication for high blood pressure. Owners of restaurants and service stations in western South Dakota must caution visitors about the possible hazards of drinking the water. The large amount of dissolved solids in the water is not only bad for human health, but also substantially increases the cost of maintaining water systems and household appliances. The Lyman-Jones and West River rural water project would be similar to the WEB pipeline project which is currently under construction in northcentral South Dakota. The project would provide good quality Missouri River water for domestic and livestock use in 6 western South Dakota counties and 12 rural communities in the area.

We spend billions of dollars trying to prevent contamination of groundwater. In western South Dakota we have naturally occurring water contamination. We should be able to spend a few million dollars to resolve this problem.

In this area, most of the water comes from deep wells. The wells are very costly to drill and have a short useful span. The average community must spend nearly one-quarter of a million dollars to drill a new well. The area ranchers also pay an

average of between $10,000 and $30,000 to drill a well. Even with these high costs, the average lifespan of a well is only 4 to 12 years with average annual maintenance costs of 10 percent of the construction costs. Having to live with this poor quality water and expensive water systems has made the area residents very thirsty for good quality water from the nearby Missouri River.

The Lyman-Jones rural water system was originally organized in 1971. Initially, no signup fee was assessed; but later, when the signup fee was collected, approximately 85 percent of the area residents paid the signup fees. Six municipalities also signed up for the project. A similar signup occurred in the West River rural water system area in the 1980s. The need and desire for good quality water in the area has been clearly demonstrated.

When the Lyman-Jones rural water system was first organized, the cost of the project was estimated at $17 million. Inflation has since increased the cost. The estimated total cost of both projects is now just below $50 million. The size of the projects makes it impractical for the Farmers Home Administration to provide financing for the projects. With the limited funds available through the FmHA Rural Water Program, the FmHA has recommended that the two projects in South Dakota try to obtain funding similar to that received by the WEB project in South Dakota.

As you are well aware, water development in South Dakota has a long history. In the 1940s, South Dakota agreed to sacrifice over 500,000 acres of farmland for the construction of four Missouri River mainstem dams. These dams have provided

hydroelectric power, flood control and navigation for downstream states. In return for the sacrifices South Dakota made for the construction of the dams, the federal government made a commitment to South Dakota. That commitment was to provide water development in the state. Since coming to Congress over ten years ago, I have continually fought for the development of South Dakota water projects. We have had some success in this effort during that time with the development of the WEB project and the rehabilitation of the Belle Fourche Irrigation project, but the federal commitment to South Dakota has not been fulfilled. The authorization of the Lyman-Jones and West River rural water project is an effort to obtain a partial fulfillment of the federal commitment to South Dakota.

The Lyman-Jones and West River rural water project also has the support of environmental organizations. I have received a letter of endorsement from the Sierra Club. The National Audubon Society has also expressed their support.

In conclusion, I would like to thank you for conducting these hearings and urge your committee to take favorable action on this bill as soon as possible.

Senator WALLOP. Thank you. That statement will be in the record in its entirety. We appreciate your taking time to come down here and speak on Senator Pressler's behalf.

Senator ABDNOR. Thank you, Darrell.

Senator WALLOP. Next is Mr. Patrick Howey, the West River Field Representative on behalf of the Honorable Tom Daschle.

STATEMENT OF HON. TOM DASCHLE, A U.S. REPRESENTATIVE FROM THE STATE OF SOUTH DAKOTA, AS PRESENTED BY PATRICK HOWEY, WEST RIVER FIELD REPRESENTATIVE

Mr. HOWEY. I would like to submit the following testimony on behalf of Congressman Daschle:

Mr. Chairman, I welcome and appreciate the opportunity to submit a statement in strong support of the authorization of the Lyman-Jones West River Water System. I want to extend my sincere gratitude to you for traveling to South Dakota to conduct this important hearing.

As you know, the House Subcommittee on Energy and Water Development held hearings last month on my bill, H.R. 3079, which would authorize the construction of the Lyman-Jones West River system. My legislation is similar to Senator Pressler's and Senator Abdnor's legislation that is under consideration here today.

I am pleased to report that the House hearings went very well and prospects for the House authorization of the project appear to be favorable.

I will try to keep my remarks very brief. I think that the Congressman's support of the project is well known. There are a couple of important points I would like to make.

First, clearly the need for the system is critical. Incredibly, I have been told that the average person in this area consumes the equivalent of a 1.8 pound rock in dissolved solids in his or her water every year. That water also contains unsafe levels of naturally occurring sodium, sulfates, iron and radium. We feel compelled to find a better source of water.

Second, these farm and ranch families have only one source of safe water in the area, that being the Missouri River. As I just attested, the available groundwater in this area is of poor quality and also is very expensive.

Third, the Lyman-Jones West River project is highly economical considering the prevailing circumstances. It uses the same common sense engineering concepts that made the WEB project work so well in Northern South Dakota.

Finally, there are immeasurable benefits to be derived from this project. The biggest and most obvious benefit, of course, is the improved quality of life that will result from the availability of better water. The availability of a reliable water supply would also make this area much more attractive to new industry exploring the possibility of locating in this area.

A rural pipeline of this type is the only available means to deliver a reliable source of safe water in Western South Dakota. If Congress is unwilling to authorize this project, it is, in effect, saying, "We do not care that our citizens are drinking unsafe water."

I do not think Congress will say that. I look forward to working in cooperation with this panel to obtain swift authorization of this project.

This is just a summary of the comments that I have here. I definitely appreciate your time. Thank you very much.

[The prepared statement of Mr. Daschle follows:]

Testimony of

CONGRESSMAN TOM DASCHLE
SOUTH DAKOTA

Before the
Senate Committee on Energy and Natural Resources
on the
Lyman-Jones West River Rural Water System
Kadoka, South Dakota
August 25, 1986

Mr. Chairman, I welcome and appreciate the opportunity to submit a statement in strong support of the authorization of the Lyman-Jones West River Water System. I want to extend my sincere gratitude to you for travelling to South Dakota to conduct this important hearing.

As you know, the House Subcommittee on Energy and Water Development held hearings last month on my bill (H.R. 3079), which would authorize the construction of the Lyman-Jones West River system. My legislation is similar to Senator Pressler's bill that is under consideration today. I am pleased to report that the House hearings went very well and prospects for House authorization of the project appear to be favorable.

I will keep my remarks brief, because I think my support of the project is well-known. I do, however, want to make a few important points.

First, clearly the need for this system is critical. Incredibly, I am told that the average person in this area consumes the equivalent of a 1.8 pound rock in dissolved solids in his or her water every year. That water also contains unsafe levels of naturally occurring sodium, sulfates, iron and radium. We are, therefore, compelled to find a better source of water.

Second, these farm and ranch families have only one source of safe water in the area--the Missouri River. As I just attested, the available groundwater in this area is of poor quality. It is also very expensive. An individual well that may only last from a few months to twelve years will cost between $10,000 and $30,000. So, unlike most parts of America, groundwater is not an economical or safe alternative. Make no mistake about it, the Missouri River is the only available source of affordable, safe water in the area.

Third, the Lyman-Jones West River project is highly economical considering the prevailing circumstances. It uses the same common-sense engineering concepts that made the WEB project work so well in northeastern South Dakota. Area residents are willing to pay their fair share of the cost of the project. They understand that this water will not be cheap, but the over 80% of the population that has already signed up for the project is clearly willing to pay a reasonable charge to have a reliable source of water for their families and their livestock.

Finally, there are immeasurable benefits to be derived from this project. The biggest and most obvious benefit, of course, is the improved quality of life that will result from the availability of better quality water. The availability of a reliable water supply would also make this area much more attractive to new industries exploring the possibility of locating in the area.

The project would be a huge boost to the predominant industry in the project area--livestock production. The livestock industry is dependent on a reliable water supply, and the lack of a reliable source of water has historically caused catastrophic livestock losses in this semi-arid area. Statistics show that the project area could support 50-55% more livestock if a reliable water source were available. That, in turn, would add a degree of stability to what is currently a very risky business and would add millions of dollars to the struggling economy of western South Dakota.

A rural pipeline of this type is the only available means to deliver a reliable source of safe water to western South Dakota. If Congress is unwilling to authorize this project, it is, in effect, saying "we don't care that our citizens are drinking unsafe water." I don't think Congress will say that, and I look forward to working in cooperation with this panel to obtain swift authorization of the project.

Thank you.

Senator WALLOP. Thank you. We appreciate your taking time to come down and comment on the Senator's bill. Thank you very much.

The next witness is Mr. Billy Martin, Regional Director of the Missouri Basin Region of the Bureau of Reclamation. Billy is out of Billings, Montana, and he is accompanied by Mr. John Lawson, Senior Project Leader.

Billy, welcome, and thank you for coming all this way.

STATEMENT OF BILL MARTIN, REGIONAL DIRECTOR, MISSOURI BASIN, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR, ACCOMPANIED BY JOHN LAWSON, SENIOR PROJECT LEADER

Mr. MARTIN. Thank you, Mr. Chairman.

I am pleased to appear before your committee today to present technical information on S. 1471 to authorize Lyman-Jones and West River Rural Water Development Projects.

The rural water system proposed in this legislation combines the proposed Lyman-Jones and West River Rural Water systems for mutual benefit. The Bureau of Reclamation has met with both of these groups over the past several years.

Following a meeting in November 1984 with representatives from Lyman-Jones, we reviewed the project for potential loans under the Small Reclamation Projects Act. The local project sponsors concluded that this was not a viable option for financial reasons and so it was not pursued any further under the authorities of the Small Reclamation Projects Act.

The Bureau has not participated in the rural water system study prepared by the consultant to the water development organizations nor have we formally reviewed the consultant's report in the context of our own Principles and Guidelines for Water and Related Land Resources Implementation Studies.

A review of the proposal in the context of the Principles and Guidelines is necessary to determine, among other things, the environmental impact, effect on other projects in the region, and, most importantly, whether the project is cost effective. Because of the absence of the required studies on the proposal, Commissioner Duvall was compelled to testify in strong opposition to the House companion bill, H. R. 3079, on July 23, 1986.

The proposed project known as the Lyman-Jones Rural Water System and West River Rural System would be administered through the West River Development District, a subdivision of the South Dakota State government.

The project area to be served is west of the Missouri River in Central South Dakota and includes a contiguous area of approximately 8,000 square miles reaching westward from the Missouri River approximately 140 miles and covering a north-south distance of some 60 miles.

The principal industry for the area is agriculture with major emphasis on livestock production. As proposed, the project is designed primarily as a water source for feeder cattle. Other potential water users include municipalities currently obtaining water from wells and/or small impoundments.

Water for the Lyman-Jones and West River Rural Water Systems would be obtained from the Missouri River. Although there are several locations where water could be withdrawn, according to the consultant's report, the most promising location appears to be at a tap of the Corps of Engineers' facilities within the Oahe Dam. Using the natural pressure at this point, water could be transported to a water treatment plant located in the vicinity of the City of Fort Pierre for basic treatment. Then by means of booster pump stations, water would be transported from the water treatment plant to elevated storage tanks located at various points within the system.

The distribution systems would deliver the treated water from the storage tanks and ultimately to the water users. A total of nearly 2,000 miles of pipeline would carry the water through the project area to the rural connections and small municipalities.

Mr. Chairman, we have met with project sponsors and obtained and offered technical support wherever it was sought. We will continue to provide technical assistance as appropriate.

Mr. Chairman, that does conclude my statement. I would be happy to answer any questions that you might have.

Senator WALLOP. Thank you.

I guess I do not have so much a question as a comment. That is traditional means, I suppose, of measuring economic viability are good for traditional circumstances, but when you have a circumstance such as this, not unlike the circumstances that may be existing in Saudi Arabia, they find fresh water to be of a great deal more value than does, say, an inhabitant of the City of New York who comes to expect it and for whom large amounts of fresh water are available at reasonable cost.

So, how do we get to the point where we measure economic value in terms of people's willingness to pay? Is that something that is within the reach of the authority of the Bureau?

Mr. MARTIN. Yes, that is one measure of an ecomomic value. An ecomomic benefit is a basis of what are people willing to pay for the service or, in this case, the water. I suppose in a case where the costs are just prohibitively high and may be beyond the means of someone to pay, that is where you get into another arena. The project may be of some great value to someone from the standpoint of having good quality water to drink or to provide for livestock, but it may still be beyond the ability of a person or an area to pay without some kind of financial assistance.

Senator WALLOP. Well, there is another thought, though, that crosses my mind, just in the brief experience I have had with this. That is, as I understand it, the aquifers that have provided the water, even the unsatisfactory quality that it is, their life spans are increasingly short, as I understand, that the wells are 4 to 12 years' duration or their life expectancy.

If it were to come to the point of abandoning a whole region, say, in South Dakota, versus building a project, it seems like somewhere in there, both the State of South Dakota and the Federal Government might weigh that there is an ecomomic benefit that overreaches the ordinary formativeness and probably is of some national benefit.

Mr. MARTIN. And certainly those factors that you mentioned should be cranked into an economic evaluation of a project of this nature versus just abandonment of an area or the continual drilling or maintenance of existing wells.

Senator WALLOP. You know, when first asked to look at this, have you had enough information available to the Bureau to do an ecomomic analysis or are these figures that are—

Mr. MARTIN. No. We feel that we do not have enough information available to us to do the economic analysis that would need to be done. There are several of the social evaluations including the factors that you mentioned, that would need to be cranked into that kind of analysis.

Senator WALLOP. How long would that take?

Mr. MARTIN. It would normally take a couple of years, but I think with the work that's already been done, it could take less time than that. The evaluation that would take the longest amount of time would be the environmental assessment to determine whether you need to do a full environmental statement or a finding of no significant impact.

Senator WALLOP. Though I must say that as I look at the water quantities involved, if the Bureau was skilled enough to measure 1,400 acre feet at Oahe, I must say I salute the new engineering technology. I do not know if you could find it. It would be like asking you to find a specific glass of water in the middle of a lake.

Mr. MARTIN. In terms of total quantity in the Missouri River, it is pretty insignificant.

Senator WALLOP. Yes.

Jim?

Senator ABDNOR. Thank you, Mr. Chairman.

We spoke of the studies. I know that there has been, I guess, two different studies undertaken. Have you looked those over?

Mr. MARTIN. We did a cursory review of the study on Lyman-Jones, Senator Abdnor, but we really did not do an in-depth review of it, and from what we saw, we believe that before you could do a good economic and social analysis there would need to be some additional studies done.

Senator ABDNOR. Would that not start from the very beginning? I mean there must be some worthwhile studies compiled already that would help.

Mr. MARTIN. That is correct. There is a considerable amount of useful information that has been developed. It would not require starting from scratch.

Senator ABDNOR. Let me follow up. Senator Wallop was mentioning a few moments ago about the other economic factors, but one we always forget around here, and I try not to let them forget it in Washington, is this state has got an awful lot involved in those dams and the State has thus far received very little benefits.

I was a young kid myself when the Pick-Sloan Plan was drawn up. I guess there was too much understanding without enough black and white in print in law because we are still waiting for some of those benefits.

Here is an area that we all admit, because it is so sparsely populated, the program is costly because of the numbers of population, sure, but sure in blazes, the need is there. These people are trying

to put up with water like this. I guess if you have to, you can, but in many places, they would not stand for it at all.

I often wondered in terms of safe drinking water, what is going to happen around here? Certainly these other factors have to be taken into consideration.

Of course, we feel like in South Dakota—Malcolm has heard me say this many times—every time I got into a water project, I remind them of the 500,000 acres this state has given up and we have done some wonderful things for other states south of us and we keep their flooding under control. We have created a lot of power. Most of it goes out of the State.

Here is something that is an absolute necessity for the welfare of the people who live here and, for that matter, even the animals that live around here. It is really important, so I hope we can search through all the principles and standards—I do not know what all—I do not have a good understanding of what the principles and standards are really going to be in this, but are they set out in the Principles and Standards you talked about?

Mr. MARTIN. We have the Principles and Guidelines, Principles and Standards. They are designed more for what is kind of a traditional Bureau of Reclamation-type project rather than this type of project, so we really do not have principles and standards that are really a key to this.

Now, the principles and guidelines that we have do allow a flexibility so that you can make adjustments to fit—or theoretically fit—any kind of situation so that they should be adaptable to this.

Senator ABDNOR. Good. I like to hear that. That is what I hoped you would say. Maybe a little friendly persuasion can get the right principles and standards set out. I know Russ will help me, right?

Thank you.

Senator WALLOP. Thank you very much for coming over here today. I appreciate it.

The next witness is the South Dakota Secretary of the Department of Agriculture, Marvis Hogen.

While Marvis is coming up, for those of you who wonder who is shuffling the cards, I am told that is static electricity from the thunderstorm from coming through the microphone down here. It sounds like somebody is getting ready for a big bridge game in the back.

STATEMENT OF MARVIS HOGEN, SECRETARY, DEPARTMENT OF AGRICULTURE, STATE OF SOUTH DAKOTA

Mr. HOGEN. Senator Wallop, Senator Abdnor, I do thank you for taking the time to come here and hear testimony today on this vital project.

If I may give you a little informal background to start with. You may have had some wilted witnesses before, but never one as wilted as this one, and I will assure you that this sweat is not from nervousness or fear, but when I flew to Pierre this morning, my heater on my airplane gave a little bit of heat, and I had them fix it, but they fixed it in the opposite direction. The inside temperature in the airplane was 140 degrees because that is as high as the

temperature could go. So, if you will excuse my appearance, that is the problem.

Mr. Chairman, I can speak to you from several standpoints. I can speak to you as a former rancher who has fought water shortage ever since I was born on South Creek, north of Kadoka, or I could talk to you as a former legislator who explored every avenue that we could imagine to try to get some kind of rural water system to get Missouri River water here or I could speak to you as Secretary of Agriculture on the state-wide water problem and what the economic impacts are, but I am not going to do any one of those three. Rather than that, I am going to speak to you as a plumber, because I think that will give you more of an idea as to what the need is than any other.

Forty years ago this year, I opened a hardware store in Kadoka. The largest and most important part of my business in those 40 years has been an attempt to get water to the farmers and ranchers in this country. We have explored every possible avenue. We have tried domestic shallow and some deep wells. We have tried taking water from stock dams. We have tried to haul water from deep artesian wells, and, believe me, absolutely none of these have been satisfactory nor has the combination of them. As the years go on, they become less satisfactory.

We have tried every one of these things. While there are a few farmer ranchers in this country that are fortunate enough to have a good supply of water dug, the area covered by these two water systems are just typical of the customers that I described to you that have tried everything.

The stock dams are getting silted in. They are getting more expensive to use. All the good locations are taken. The shallow wells were never good at the best and they are not going to improve any.

The deep wells, and I am talking about semi-deep wells, not what we call artesian wells, but the deep wells just are not practical. The bulk of the area south of the river where you get close to the formation down there, you can get them, but you cannot here. Of course, the one that looks like the answer, a deep artesian well, has become prohibitively expensive and short-lived.

I am just satisfied that the farmer ranchers that were fortunate enough to dig artesian wells for $5,000 or $10,000, when those wells corrode up or when the casing busts through, they are not going to be able to afford to drill another one.

There is absolutely only one satisfactory way to get water to this area. That is bring water by pepeline from the Missouri River. Not only my business, but many other people have explored other avenues and there are no satisfactory alternatives.

This is not just for the farmer rancher, but for the little town. Right down in Lyman County just this winter—Senator Abdnor, I am sure, was in touch with what happened when their dam washed out, a source of water—they were in a fix.

What this little town of Kadoka is going to do when the deep wells corrode up or rust out, I do not know. There just is not money available to dig wells at today's cost.

In closing, let me just share one example, and just by coincidence, George Renning, who is the Chairman of the Lyman-Jones Rural Water System here lives 5 miles north of Kadoka. I was born

a half a mile from his place, and I just want to tell you about his example because it is typical of so many farmer-ranchers.

For years George depended on a shallow well for domestic purposes and depended on stock dams for water. As he tried to modernize and live the life that has become taken for granted in most of the country, the shallow well would not take care of the needs. He was fortunate enough to drill a deep well early when it was economical to do it, but here is what he discovered. That, number one, that water is not suitable for irrigation, for domestic uses, gardens, lawn and so on, trees, and it is not fit to drink.

The second thing, his dams are not fit to drink. The little shallow well is good drinking water, but it is so limited in quantity, so his situation is typical. He has a deep well for his stock well use when the dams do not suffice. He has dams when they have water in them. Then he has a little domestic well to use for palatable drinking water.

Now, just think of how expensive that is in terms of manpower and dollars. It is extremely difficult. That is absolutely typical of this whole area. The things that my customers and my friends have gone through to get water, you could write a book on.

Finally, as Senator Abdnor said, they owe us. I am not an advocate of great subsidies, but this is not a subsidy. This is just a payment for a debt owed. When West River lost all those acres in the Missouri River, some promises were made. Those promises have never been kept by the Federal Government to West River, South Dakota.

I think funding of a rural water system that will serve such a wide area and give the people in this area the quality of life that most of our other citizens in the United States have come to expect is only a fair and prudent move. I congratulate you again for your work on this bill. I pledge my personal help and any State help that I can give you to see that such a measure becomes the law of the land.

Thank you.

Senator WALLOP. Thank you.

While, as the Chair thoroughly understands the enthusiasm for that statement, let me suggest that at a public hearing like this, that if we have either great enthusiasm or great rage, this hearing soon breaks down so I will ask you not to respond. I understand it. I appreciate it. I know Mr. Hogen does, too, but I think that we cannot keep control of the hearing as it goes along.

Mr. Hogen, perhaps I will ask Mr. Renning when he comes up to the witness stand, but I was wondering in terms—you say how expensive it is. Yet this water from this project is said to be going to be very expensive to use as well.

How would those costs compare?

Mr. HOGEN. I honestly believe, and you can get into an argument on this easily, that the people that have lived in this country all their life, as I have, have come to expect as a normal thing the tremendous costs of the water supply that they have, and I do not really think they stop and think of the manhours that they spend in maintaining those stock dams and maintaining those deep wells and those pumps and those supply lines.

I have seen studies of what they do cost, and in my own particular case, the biggest single expense for many, many years on my operation is to maintain a good supply of water. Now, let me repeat that is not in every case because there is some lack of enthusiasm of the people that are fortunate enough to have a low-cost water system.

But I just know from the size of the bill that we have in the hardware store that it is absolutely one of the major expenses, and I would not be here speaking to you today on this project if I did not think that, even with the water bills that we will have with the rural water system, it still is a better alternative than the one we have now, and you must measure again in 1980 and 1982 tremendous costs.

I personally know of two bankruptcies that resulted when there was no water for cattle and the people, in an attempt to hold their herd, moved their cattle out of the State. You multiply that over a year, a few years, and it will pay a lot of water bills.

Senator WALLOP. Thank you.

Jim.

Senator ABDNOR. I really do not have much to add except I can tell you that Secretary Hogen knows what he talks about. He has been in all phases of work, from a merchant to a rancher to a legislator, and I forgot he was a plumber. I suppose he had to, to go with the hardware business, and I also know that it could be costly.

But I know what it is like to be without water. I think we are going to have to admit water is going to be even more expensive. It is like oil. When there gets to be a shortage of it, and it just seems to be such a crime when good water is needed, we cannot meet the kind of standards that they want you to have for good safe drinking water, that we cannot make this come about, but maybe someone with a sharp pencil could prove that it is an economical program for the long run.

Mr. HOGEN. Mr. Chairman, studies are available that show the cost. I do not have one with me, but I am sure that I can get you some that will show you what the average true cost of water for West River people is under today's circumstances.

Senator WALLOP. If you were to make that available to the committee, I am sure it would be an interesting part of this record.

Mr. HOGEN. I will send it to you and ask you to make it a part of the record.

Senator WALLOP. We appreciate it very much. Thank you, Senator Hogen.

Mr. HOGEN. Thank you, Senator Wallop and Senator Abdnor.

Senator WALLOP. Now we are going to move into that phase of the hearing where we take people as panels. The first panel is Mr. Joe Hieb, Board of Directors of West River Water Development District and the Lyman-Jones Water Development Association; Mr. George Renning, President, West River Water System and Vice President of the West River Water Development District, and the Honorable Raymond Moore, Mayor of Kennebec.

Would you gentlemen please come up?

Mr. Hieb, if you would begin, please?

STATEMENT OF JOE HIEB, BOARD OF DIRECTORS, WEST RIVER WATER DEVELOPMENT DISTRICT AND LYMAN-JONES WATER DEVELOPMENT ASSOCIATION

Mr. HIEB. Mr. Chairman and members of the Committee, my name is Joe Hieb. I own and operate a fuel bulk business in Reliance, South Dakota. My wife operates a restaurant in Reliance. I am a Director of West River Water Development District and a Director of Lyman-Jones Rural Water System. I want to present testimony on Senate Bill 1471.

The area to be served by the proposed Lyman-Jones and West River Water System covers all or parts of seven counties in West Central South Dakota and will serve farms, ranches and small communities. We are an agricultural area where cattle are a main product and winter wheat a major crop. We are very sparsely settled with a population density of less than two persons per mile. Communities to be served range from a population of 4 to 1,088.

The proposed rural water system will take water from the Oahe Dam, treat it for human consumption, and transfer it by pumps to storage tanks, nearly 2,000 miles of pipeline to serve 720 rural households, 405 pasture taps for livestock and 13 communities with a total population of 5,932 at a projected cost of $59,840,000. This project will provide only potable water for human and livestock consumption.

Why authorize a rural water system that will benefit so few people? The answer to that question is simple. We have no decent water over most of the project area. Two towns take their water from impounded lakes, but in dry years, they must also rely on deep wells where they would not have adequate water.

The water from these lakes becomes very poor quality in dry years. There are very few locations where a shallow ground water of good quality is available and then most of extremely limited quantity.

This leaves the deep well, 1,000 feet or more in the east end of your project and nearly 3,000 feet deep in the west part of the project area. This will run $10,000 and up in the east to $40,000 in the west. This water is not only expensive, it is loaded with undesirable minerals and does not meet anyone's idea of a good quality drinking water.

Total dissolved solids are so high that a typical family of four runs over one-half ton of dissolved minerals through their household plumbing in a year. Pipes fill with deposits. Fixtures stain and it lifts chrome off faucets. Sulfate levels in some areas are 1,300 parts per million or more. The maximum recommended levels are 250 parts per million.

Two towns must treat their water to remove excess radium. This deep well water does not meet the latest drinking water quality standards, but we use it because, in most areas, it is all we have.

I want to interject a little bit here. I was thinking about it driving down here, that, you know, in our area, most people will not put this water into their cooling system on cars, trucks or tractors, because it deteriorates them, but still most of those people have to drink this same water.

Many people cannot drink this water for health reasons and others refuse to use it because of all of the associated problems. They haul their water from the nearest acceptable source. Costs quoted range up to $40 per 1,000 gallons. This water is stored in cisterns and is susceptible to contamination. While this is an expensive alternative, it is a better option than deep wells for many people.

Most ranchers rely on surface waters impounded behind small stock dams for livestock use. Most of these stock dams have lost much capacity because of silt. Many have been washed out. In normal years we only get 14 to 17 inches of precipitation. These small ponds nearly dry up.

Water quality is very poor and cattle do not drink as much as they should because of this poor quality and fear of becoming mired. Some do become stuck in the mud, occasionally die, and all have a danger of weight loss and disease.

In dry years, such as 1985, most of these stock dams are dry and unusable. While stock dams are mostly used for livestock, we do have some ranches that pipe this water untreated into their homes where it is used for toilets, washing, bathing and, in some instances, cooking. They will usually haul their drinking water.

Due to legislation and regulations, some highly erodable cropland must be taken out of production and reverted to grassland. This means that land payments must still be made and the county still collects taxes, but we must put livestock on the land if we are to get any income from it. We must pipe water for livestock to the land because there is no suitable sites for cropland on the land.

I now introduce George Renning and Raymond Moore who will provide specific information about farm-ranch community water problems after which I will summarize.

George?

STATEMENT OF GEORGE RENNING, PRESIDENT, WEST RIVER WATER SYSTEM AND DIRECTOR, WEST RIVER WATER DEVELOPMENT DISTRICT

Mr. RENNING. Mr. Chairman and members of this committee, this water situation has been reviewed previously by Marvis Hogen.

I operate a farm and ranching business near Kadoka. I also serve as Director of West River Water Development District, and I am on the Board of Directors and Chairman of the Board of West River Rural Water System. The West River Rural Water System and the Lyman-Jones Water Development Association are the two rural water systems being authorized in Senate Bill 1471. We will build these two as one system with one common water treatment plant.

I guess you might say I am typical of most of the agricultural operations in the proposed project here. I raise crops and run 200 cows with calves on 5,000 acres in the Kadoka area.

My problems with water are also typical. I must rely on stock dams and the deep artesian well for my livestock water. Neither of these sources is very good. Many of my stock dams are in bad condition. Most have heavily silted in. Two have needed repairs this spring, and I have only been able to repair one so far.

When the stock dams get low, the water quality becomes very poor and cattle refuse to drink it. 1985 was a dry year and many of my stock dams dried up. I have to pipe water of very poor quality from my artesian well.

My artesian well is 2,880 feet deep and was drilled in 1965 at a cost of $11,000. The same well would cost me over $40,000 today. It is not a flowing well, but must be pumped, adding to my cost of operation and, in addition to the high cost of obtaining water, I have another problem.

The water quality is very bad. The water is very high in iron, sodium and magnesium levels, and in addition to livestock use, we must use this water in the house so it must be filtered and softened. Even then, it is extremely hard on pipes, plumbing fixtures and livestock tanks. The water heaters last probably about five years and they are quite expensive. You cannot water grass, garden or household plants with this water as the water kills them.

We are all faced with the problems of a very expensive, very poor quality of water for our families and for our livestock. We need good water. Most of our available water does not even meet standards for human use and is not even too good for livestock.

Senate Bill 1471 will authorize the rural water system for this area. It will not be cheap water, but when we figure all the costs, our present water supply is not cheap either. We need a rural watar system and we need your support for this legislation. Thank you.

Senator WALLOP. Thank you, Mr. Renning.

Mr. Moore?

STATEMENT OF RAYMOND MOORE, MAYOR, KENNEBEC, SD

Mayor MOORE. Mr. Chairman and members of the committee, my name is Raymond Moore. I am the Mayor of Kennebec, South Dakota, with a population of 325.

Previously, we obtained our water from a small dam northeast of town. This water was treated in a small filtration plant and then run through our distribution system to the residents. This water was of poor quality because the lake was shallow and we seemed to have heavy algae buildup and very muddy. Still, many ranchers in the area haul water from Kennebec to their homes because our water, bad as it might be, was better than their well water.

On May 9, there was a heavy rain of seven inches. The flow washed out our dam, and we were literally without water, a dry town. We managed to get an old well on-line at 12 gallons a minute. Later we put air in it and got 40 gallons a minute. The National Guard began hauling water from Chamberlain, a distance of 31 miles.

It soon became evident a town of our size could not afford to repair the dam because of the high cost and time. We barely had enough water to take care of our basic needs, even with tight restrictions, and we were virtually without fire protection. The artesian water well was started as soon as possible.

Our water problems continued. On May 23 we ran completely out of water. We were totally dry for 24 hours and again had to haul water, a very expensive operation.

A new well is now in operation at the cost of over 37,000. We have water at a pump rate of 150 gallons a minute. This water has a high iron and mineral level. We run it through our water treatment plant which removes most of the iron. The water is of a poor quality, but at least it is wet and will put out a fire.

Other communities face similar problems. Dams wash out, wells cave in or pumps fail. Water quality is poor and does not meet drinking water quality standards. We need a better system. The proposed water system will fill that need. I ask your support for S. 1471.

Thank you.

Senator WALLOP. Thank you, Mr. Moore.

Questions?

Mr. HIEB. While I was speaking here, I had one letter handed to me and one resolution from the town. May I read them?

Senator WALLOP. If you would not mind, Mr. Hieb, we will accept those into the record because I do want to give the witnesses who have come here an opportunity. They will all be in the record as if they had been presented here.

Mr. HIEB. Yes, sir. And I had some exhibits here which you might find interesting.

The first is two pieces of pipe taken from the area of the project. These pipes are typical of the problems of both household and municipal water system piping that carries the deep well water.

Note the buildup of mineral deposits and the closing of the pipe. Unfortunately, these two pipes are not exceptions. We see things like this all too often. The pipe is on loan to us so we cannot leave it with you.

I am submitting a book containing charts, exhibits, resolutions of support and testimony from the Dakota Chapter of the Sierra Club, Upper Missouri Water Users Association, United Family Farms, South Dakota Water Congress, South Dakota Association of Rural Water Systems, West Central Electric Cooperative, which is the main REA electric system in the project area, and from counties, cities, rural residents of the area and others.

I also have our consulting engineers present, John Madden and Howard Paul, who are available to answer any questions you might have.

To summarize, we badly need a certain supply of good water. The present sources are expensive and do not meet standards for human consumption.

I might add, when people stop at my service station at Reliance there, people going through that are not used to the water, we advise them not to drink it because the rest stops are not close enough together.

We have been engaged in the struggle since 1966. We have over two years' time $300,000 in locally-raised funds and $200,000 in State loan money in this effort. Our consultants have completed plans and specifications for tapping into the powerhouse piping at Oahe Dam on the Missouri, and the Corps of Engineers has agreed to this tap, so we have the source for an adequate supply of good quality water.

We need your help in getting it to the rural residents and communities who need it so badly. We request your approval of Senate Bill 1471.

Senator ABDNOR. I just want to say, Mr. Chairman, I can certainly verify those pipes you were looking at a little bit ago. I have had to contend with them, too, before I went to Washington. It is that bad. I used to look around and get water instead of using the water in my well because you would break a radiator in a short time to do it.

Just to show you how long I have been around, that guy, I used to play basketball against; that guy, I used to serve in the State Legislature with; and that guy, I used to try to coach, and I do not think he or I, either one of us, thought we would have the term honorable in front of our names in those days.

Incidentally, Raymond, I just want to tell you I had everyone in Washington convinced that my town of Kennebec had a population of 370. Then the story of the dam break was printed in the Washington paper, and they said there was 342, and now you come along and tell me it is 324. I had better get my stories right.

Senator WALLOP. Thank you all very much. I appreciate your taking time to come here this afternoon and I appreciate those letters and statements which will be in the record.

The next panel is the Honorable Doris Miner, State Senate District 29; the Honorable Harold Sieh, State Legislature, District 29; the Honorable Richard Waddel, State Senate, District 27; the Honorable Larry Gabriel of the State Legislature, District 27; and the Honorable Roger Porch of District 27.

Once again, I would ask you if you would mind just picking up the microphone off the boom. It seems to work a lot better.

STATEMENT OF HON. DORIS MINER, SOUTH DAKOTA STATE SENATOR

Senator MINER. Senator Wallop and Senator Abdnor, thank you for coming.

I was born and raised in the far southeast corner of Tripp County on a gumbo ridge that had no water. I learned to ride horseback by riding an old mare that pulled a stone bolt with a 50-gallon barrel on it. She was hooked up every morning and whoever had time went and got water. So, I do know what it is like to be where there is not adequate water.

I think one of the most important things we have to look at today is water cost, these people right now without having adequate water. One of the things we have now is the knowledge and the ability to put water where never before could water be transported. It will stabilize their economy, their income, by being able to have cattle herds of substantial size where now they cannot do that because knowing in a dry year the stock dams will not have water.

You know, we go back to what Government should do and should not do for us as citizens. Some things, we just cannot do by ourselves, and I believe projects like this should have a high priority because we cannot do it alone. We need the help of our Government.

One of the other things I believe that is more appropriate is that in these times when the tax dollar is tight, that we look at what we can do with the tax dollar to help our people, and when we see a surplus of food, I believe then the priority has to be for domestic water over irrigation.

I thank you for coming and your time today.

Senator WALLOP. Thank you, Senator Miner.

Representative Sieh? Is that correct?

STATEMENT OF HON. HAROLD SIEH, SOUTH DAKOTA STATE LEGISLATURE

Mr. SIEH. Yes, it is. I am Representative Sieh. I co-chair the Appropriations Committee in the State of South Dakota. We welcome you here today. I am glad you could come and visit with us.

This particular project was started a few years ago. We had an ETSI program. We thought we were going to have a coal slurry pipeline that runs through Wyoming, but something happened in the meantime. We did not get that, but all the research that was done was not lost because this project is taking the use of that particular research right along with it.

Over the years we have supported in the Legislature of the State of South Dakota to some extent rural water projects from the State of South Dakota. I had the original bill for $1 million that we put into rural water projects. We limited that to ten percent of the cost of the project or $300,000, and over the years we have had some smaller appropriations, but never enough to start on a project like this.

We did, through the Water Facilities Fund, make a loan to this particular project and knowing the need for the water and the quality of the water—in many areas, the quality is very poor and you have heard that story from almost everyone that talked to you—I would hope that you would consider this project favorably and get your colleagues in Washington to do the same.

Thank you.

Senator WALLOP. Thank you, Representative Sieh.

Representative Gabriel.

STATEMENT OF HON. LARRY E. GABRIEL, SOUTH DAKOTA STATE LEGISLATURE

Mr. GABRIEL. Yes. Thank you, Chairman Wallop and Senator Abdnor. We appreciate you coming here today.

I live on a ranch in extreme Western Haakon County in an area where we are blessed with pretty good water, but I have some written remarks here. We have had problems over the past few years with water supplies when we do not get any run-off in the spring.

Some of my neighbors and myself considered forming a small rural water system a few years ago to try and get funding through the Great Plains Program and also Soil Conservation Service. After we had several meetings and had an engineer present, we came to the conclusion that it was going to be very expensive. We were going to have a minimum of $300 per month whether we used any water or not just to service our debt. It could have been much

higher than that. We disbanded and said, "We just cannot afford it."

I am sure, Chairman Wallop, you are concerned with the cattle economy the way everybody from the midwestern states are. I guess my feeling toward the whole project is one of economics and although everybody knows we need the water in this area, I think it gets down to whether or not we can afford it.

We know agriculture and the cattle business are very competitive and if our costs go up more than the costs do in some other area, under today's prices, we might not last in business because it is that competitive.

The size of our ranches here is probably not as big as in Wyoming, but still we are looking at a very thinly settled area. You know, we just do not have the ranches and farms so the water cost is very high just to get it distributed.

I feel that it is imperative, if we are going to be able to pay for a system, that we are going to have sufficient assistance. I very much support this idea of going through Federal authorization and hopefully Federal funding for this kind of a project, just because it is going to be necessary.

I thank you for your time.

[The prepared statement of Mr. Gabriel follows:]

Testimony of Larry E. Gabriel

My family and I live on a cattle ranch 34 miles North and West of Philip. Specifically 1 ½ miles East of Penn. and Haakon County line and a mile North of the divide between Bad and Cheyenne River drainages.

I would like to share with you an experience of five years ago. Our area had little or no spring run off. Dams were low and very boggy. Cattle would stay around the dams bawling, trying to drink periodically. Many would leave to graze, still thirsty. We hired a back hoe to pull mud from the shore. This would help for a few days but water levels were dropping fast. The back hoe could reach only a few feet into the water so these watering spots soon were into the mud. We attempted to get a drag line into our area. There was only one dragline in western SD, he was very busy North of the Cheyenne in Meade County.

Another alternative was shallow wells. Many were dug, many cased even with very limited quantities of water. Quality varied from site to site.

Six of my neighbors and myself along with soil conservation personnel started having meetings to pursue a small water system. We would need an artesian well, dug on high ground. The well would need to be at least 3000 ft. deep and would need to be pumped. We would need a reservoir or holding tank as well as our distributive line. An engineer attended our last meeting. He estimated our minimum monthly water bill to be at least $300 even with assistance from Soil Conservation and the Great Plains Program. It was evident that we ranchers could not afford this type of a system so we disbanded. That fall we did get some hard rains and we haven't had as severe of a problem since.

We have fairly good water from a well for our homestead. We have another home for our hired help where the well water is definately not fit for household use. We piped water there from another shallow

well but according to State Department of Health if shouldn't be used for human consumption.

A rural water system as proposed, West River and Lyman Jones, could provide water for the homes in this area at much higher quality than we presently have. My main concern though is of economics. As we all know agriculture is in a real bind today and nothing is appearing on the horizon to make a significant change. Therefore it is imperative that the cost of water is not so high as to become another burden on the rancher and farmer that causes our demise.

Going back to the case of myself and my neighbors when we faced the proposal of a system with a minimum cost of $300/month. With the cattle market as it's been for the last 3 years, we would have had a very hard time covering this cost. In short, I'm glad we said "no".

The main reason our cost in this area is so high is due to our sparsity of population. An average ranch in this area would be about 250 cows. At 20 acres to run one cow for a year, this amounts to approximately 5000 acres. In the competitive nature of agriculture, we can't afford to pay more for water than ranchers and farmers who live in areas that are more productive. For example, I lived two years in Dewel County in eastern SD. On the ranch I managed 4 acres would summer a cow and 1 acre would raise enough feed to winter her. It stands to reason then that their farms and ranches are much smaller, therefore their cost to distribute water is much cheaper.

In conclusion a rural water system would increase our quality of water, stabalize our cow herds and our production but it must be affordable.

Senator WALLOP. Thank you, Representative Gabriel.
Representative Porch?

STATEMENT OF HON. ROGER PORCH, SOUTH DAKOTA STATE LEGISLATURE

Mr. PORCH. Thank you.

Yes, I am Representative Roger Porch and I represent much of the area comprising these two water projects. I think many of the people here are my constituents and they have a common goal, that being the delivery of good quality water. I am also a former rancher so I know the value of that commodity.

I would like to express my appreciation for your attention to this project. The Lyman-Jones and West River Rural Water projects are important undertakings for this area, both from the economic standpoint and from the standpoint of personal comfort, health and well-being. I feel confident that we can demonstrate today that these projects are a viable and desirable alternative to deep wells with poor quality water or us hauling water.

Much of the testimony today will concern the need of a project such as this. I do not think the need for good quality water delivered at a reasonable price is even arguable. Therefore, I plan to base my remarks on the cost effectiveness of delivering good quality water to these farms, ranches and communities.

I live about 40 miles south of Kadoka in an area of sufficient but not abundant water supply. Our wells are from 60 to 300 feet deep with a pumping capacity of from six gallons to perhaps 20 gallons per minute. The quality of our water is good. I think some of the people here today would say that it is excellent, although we do have a slight lime buildup problem.

I am told that the average farmer or rancher in this project will expect a water bill in the neighborhood of $100 a month. I suspect that may be a little low. Naturally, there will be a variance due to usage. That $100 a month figure is interesting to me.

We have one good well with about two and a half miles of pipeline. This well usually waters from 200 to 400 cows, depending upon pasture usage and time of year. The pumping cost alone, just the pump alone, runs in the neighborhood of $75 to $85 a month when we are using that well heavily. That figure does not include pump replacement cost which is high and almost an annual cost because of high pressure force and it also does not include domestic use or use for calves being wintered at the headquarters.

The point I am trying to make is that even in an area of good quality, abundant water, that is still a high-priced commodity.

In reading through some of the testimony that was given on H.R. 3079, I noted that many families are forced to haul their water for domestic use and the price range quoted for hauling that was $4 to $23 per 1,000. The cost of this project will be about $2.50 per 1,000 gallons and, again, that makes it cost attractive to me.

We have not even considered water meter life expectancy, plumbing and fixture corrosion and safe use of water for lawn and garden use.

The State Water Plan has what is known as the State Water Resources Management System and these two projects have been in-

cluded as a swarms project in the State Water Plan and, therefore, has the endorsements of the local levels of government and the South Dakota Legislature.

Today I would pledge my continued support and I would ask that you fellows take this back to Washington and give it your kind consideration and authorize our project.

Thank you.

Senator WALLOP. Thank you, Representative Porch.

Representative Sieh, I single you out because I heard you say the Appropriations Committee.

Has there been or is there now any move on the part of the State to pick up a share of this project?

Mr. SIEH. Over the years we have appropriated funds to an account that allowed ten percent of the cost of the project or a $300,000 limit. Now, that was a grant.

I do not think there has been any particular grant to this particular project at this time. There was $5 million we got through the ETSI program. We put some additional funds with that and the Water Facility Funds and there were loans made out of that to the various conservation districts over the State. That is to be paid back at a rate of interest set at the time of the loan.

Senator WALLOP. So, would there be any possibility that the State might come up with ten percent of the $50 million project?

Mr. SIEH. I doubt if we could come up with ten percent of the total project. That would be $3 million or it would be $5 million for both projects. I doubt if we could come up with that kind of money. We would sure make an effort to come up with some, though.

Senator WALLOP. Well, I am not suggesting that I know a magic formula or point in there. Admittedly, Wyoming had a little different set of circumstances than has South Dakota, but we, for instance, in the Buffalo Bill Project made an arrangement with the Department of Interior. We actually had a contract with them. This project, despite the Web Project and other things, I think, would still have to be considered unique, a different role for the Bureau of Reclamation than any they have picked up to date.

I guess what I am suggesting is that it would not be at all bad if some representative of the State government were to get themselves into some negotiation with the Department of Interior. Things seems to move faster when you get secretarial involvement and a willingness on the part of the State to (a), make its case and, (b) participate in it.

I do not know. I am not suggesting any formula, any amount of money. I do not know what that is and that would really primarily be between the State and the Secretary.

I know when we were talking about these things—Russ was there—some of the administration wanted a hard and fast percentage before there would be participating. I fought very hard against that because the circumstances of States are different at different times, though their needs cannot be controlled as to the moment in time they occur.

So, I am just suggesting that maybe you all in the Legislature might examine how you would take some small part of the State's role.

Mr. SIEH. Twenty some projects have received funds from the grant program. Now, some of them were limited to ten percent because they were small, small projects. The Winner-Tripp County Water Project, that received $300,000. I believe they received some later on when they added to the project. Several other projects have received up to $300,000.

At the present time, I think we are out of money, and though the State of South Dakota is limited to the amount of money that we can——

Senator WALLOP. I understand that. Please do not misunderstand what I am saying. I am not presuming to tell you how to run the State of South Dakota because I would not begin to. I have been in the Legislature myself. I can think of nothing I would less rather hear than for somebody from Washington to tell you how to run it.

Mr. SIEH. It probably would not do you any good to tell me because there are 105 legislators.

Senator WALLOP. But I would suggest, nonetheless, that the State itself find some way to involve itself in the discussions of this with the Secretary of Interior and the Bureau. It just does seem to make things move a little faster than to rely solely on an initiated project.

We have found that experience in Wyoming and we have legislators in Washington that are pretty well positioned for those kinds of things. Still it helped us when we got the State involved a bit. Maybe that is just a trip back there saying how important it is to the Bureau and to the Secretary, you know, going down with your two Senators.

It would be very helpful. They are well respected in Washington and when the State speaks as one, sometimes things happen better than they do when just the elected representatives in Washington are involved.

Mr. SIEH. Thank you.

Senator ABDNOR. I want to commend the legislators for their fine statements. They are very helpful for the record.

Secondly, I said earlier that I am not on this committee. I am Chairman of a subcommittee in another area with jurisdiction over the Corps of Engineers. I Chair that, and I have the new National Water Policy Bill. This is an all new approach after 12 years of trying to get one. I am Chairman of the Conference Committee.

We hope to get a bill out, hopefully the first week after we get back or we are in trouble, but that only applies to the Corps' projects. We did have a lot of pressure on cost-sharing and we do have it, but we watch each other's jurisdictions. I am not overlapping into Interior or Bureau of Reclamation. They come up with their own solution.

But in that, Senator, we did include the ability to pay and, believe me, I had South Dakota in mind when I went in there. We are a great State, we are a beautiful State, but we are not rich in minerals like coal, oil or anything else except for a little gold, I guess, in the Black Hills.

Senator WALLOP. That is not so damn valuable nowadays either.

Senator ABDNOR. That is true.

Representative Sieh touched on something, the ETSI water program. I know this will be close to you here, to your subject, because

water rights is a big thing. I could not think of anyone who fights more for water than you do.

The Governor and the State Legislature did a beautiful job of working out the pipeline for ETSI. It would have helped this area with their local water supply.

Am I wrong, Harold? Was it going to bring in seven million a year or five, or whatever it is? I thought it was seven, but it was a great idea, that this was going to develop our water and put our matching water in and so——

Mr. SIEH. Five million a year.

Senator ABDNOR. Five, but low and behold, the State of Missouri got concerned that we were going to take too much water out. Then they got Iowa to join and then they got Nebraska to join. They tell us that the evaporation off of Lake Oahe would have been far more than the water that would have been taken for this pipeline.

But this is a real problem. I mean, we think we have got a little something out of this or at least we have got the water and then when we go to use it, we cannot, even though Kansas City or the State of Missouri uses way more water than we even touch out of our river.

That is the real problem and when it comes to something like this, it has just got to receive consideration from Washington.

Senator WALLOP. Well, Jim, I agree with that, but if you think that was worry about the water, all they did was use that word to say that they had reason, but I think that the barges and the railroads had a little finger in that pie.

Anyway, thank you all very much. I appreciate it.

The next panel is Mr. Dennis Davis, Executive Director of the South Dakota Association of Rural Water Systems; Ms. Gaye Tollefson, Executive Director of the South Dakota Water Congress; Mr. Jack McCulloh, Executive Director of the South Dakota Stockgrowers Association; Frank Means, Tribal Council and Chairman, Economic Development Commission of the Oglala Sioux Tribe; Mr. Ray Woodsen or Mr. Robert Miller of the South Dakota Municipal League in Pierre; and Mr. Steve Reed, Manager of the West Central Electric Coop.

Mr. Davis?

STATEMENT OF DENNIS DAVIS, EXECUTIVE DIRECTOR, SOUTH DAKOTA ASSOCIATION OF RURAL WATER SYSTEMS

Mr. DAVIS. Mr. Chairman, Members of the committee, my name is Dennis Davis. I am the Executive Director of the South Dakota Association of Rural Water Systems. The association I work for represents rural water systems and member towns from across the State.

Our organization was built or organized in the mid-sixties to help and support farmers, ranchers, rural residents and rural towns in obtaining quality drinking water throughout the State. We are a nonprofit corporation. We are not an entity of government and we are a group of people that have grown in numbers throughout these years. Our desire is to bring good quality drinking water to

the homes, the farms, the ranches, to the people in the State who need this water.

I am familiar with rural water systems, their construction, financing, operations and maintenance, management and the financial status of systems. Throughout this past—well, since the early 1970s, we have built in excess of $200 million worth of rural water systems in this State. That equates to a little over 26,000 miles of pipeline. That is enough pipeline to go around the earth once and a few thousand miles left over.

I think it is significant to point out because we have built a lot of rural water systems in this State. They serve quite a number of farmers and ranchers in the State and rural towns and we know they work. They are financially sound. They are people-oriented, they are people-directed and they are being built where people want them.

In the past we have been able to use the Farmers Home Program for funding of these projects in this area. The programs, as far as the loans and grant programs, that have been available simply do not work in this area. We have looked at every means of financing this water system that there is and to be very honest with you, only going to Washington is—that is the only answer that we have.

The project area we are talking about presently has extremely expensive water of very poor quality. Since the inception of rural water in South Dakota, we have recognized the need in this area. However, we have not been able to finance the systems simply because, as I have said, the program has not and does not exist to assist these folks to meet their needs.

Rural water presently provides water service to approximately two-thirds of the State. These regionalized rural water systems work, as I stated, and we simply need assistance to finance the Lyman-Jones West River Rural Water Systems and we are sure that they will work.

There was a comment about environmental impact. I think it is important to recognize that limited environmental impact that a rural water system has. The environmental impact of rural water systems in South Dakota have been evaluated and are well understood.

Since the early development of the Butte-Meade Project in the late 1960s and Lincoln Rural Water System in the early 1970s, as I have stated, we have constructed over 26,000 miles of pipeline in South Dakota without adverse environmental impact. I think there is quite a construction track record to show that the environmental impact is almost negligible.

Rural water construction, like the installation of rural telephone and rural electric lines, results in minor temporary construction inconvenience and long-term improvement in quality of life for the project area. To give you an example, we would expect a rural water line in a master area out in this area within about three years to grow over; in effect, not to be able to see where the line is, so, as I stated, the impact is extremely—in an area that is being farmed, I think you will see, within about 18 months to 24 months, that you would not be able to see a noticeable construction effect.

Being able to drink your own water instead of hauling it and having livestock watered is a definable and positive impact. There

is also a limited impact as far as providing water to game animals in these remote areas.

Thank you.

Senator WALLOP. Thank you, Mr. Davis.

Ms. Tollefson?

STATEMENT OF GAYE TOLLEFSON, EXECUTIVE DIRECTOR, SOUTH DAKOTA WATER CONGRESS

Ms. TOLLEFSON. My name is Gaye Tollefson. I am Executive Director of the South Dakota Water Congress. Our Board of Directors recently unanimously endorsed the West River and Lyman-Jones Rural Water Projects. We respectfully recommend the speedy consideration and approval of this legislation.

Our criteria for endorsement includes, among other things, that a project must have responsible local support, that it is compatible with the State water planning process as well as South Dakota Water Congress policies and that it have a significant benefit to the State. We feel that the West River and Lyman-Jones projects meet this test and our endorsement carries our commitment to promote and expedite the project's development.

We appreciate the opportunity to express our views of these projects and encourage your favorable action on a project that is sponsored by the people who desire to better their lives and the lives of future generations.

We do have additional written testimony which has been presented. With your permission, I would like to at this time take off my professional hat and talk as a proud native of this area.

I was born and raised about 15 miles east of here and although I have been gone from the area for several years, I think my memory is fresh enough to recall some of the instances that happened in terms of water use here.

My family hauled all of their domestic water from a community well that was about ten miles away. It was a constant proposition. We had an old rusty truck that seemed to break down at the most inconvenient times and, additionally, it seemed like we were always hauling water when we should have been busy doing something else in our fields.

The memory that sticks with me the longest is—I do not know if it was because I was the agile, scrawny kid of the family or what, but I got to clean the cistern. We had a cistern in our basement and it was my job to go down the ladder with a bucket on a rope, a broom, some Chlorox and other cleaning aids.

It was not a very pleasant experience, particularly when you are claustrophobic, number one, and, number two, there were generally other creatures in the cistern along with you, generally in terms of lizards and at that time because I was born and raised out here, I guess I did not think about it much. We did not talk about it amongst our peers, I guess, and so it was not—the quality of water and what we drank it out of and those types of things were not as repulsive to me as it is now.

I just think that at that point there was not much talk about a rural water system, but how much easier it would have been for all of us, not only in household use, but also in terms of stock dams

drying up and having to sell down herds at generally depressed prices and then trying to build them back up, naturally, when the prices were up again.

So, that is a personal point of view and I really appreciate the opportunity to express it.

Senator WALLOP. Thank you, Ms. Tollefson.

I just want to say that when I was a little fellow we used to have a ranch out east of Sheridan and we had to haul water to it, but worse than than, we used to pack in snow all winter. Every time we had a fresh snow, we would pack our cisterns with snow and I was not the scrawniest one around. I was just the youngest one so I got to share your experience.

Jack McCulloh?

STATEMENT OF JACK McCULLOH, EXECUTIVE DIRECTOR, SOUTH DAKOTA STOCKGROWERS ASSOCIATION

Mr. MCCULLOH. Chairman Wallop, Senator Abdnor, I am Jack McCulloh, Executive Director of the South Dakota Stockgrowers Association and I have been asked to present a statement that our association favors this concept and ask that that be on the record and known to this committee.

I would hope, Senator Wallop, that the folks here—and you have heard from many cattlemen; you have heard about the need, the dams, the wells, the cost, the cost effectiveness, the possibilities, as you expressed it, for the future unless some transition is made that is workable. So, to go beyond what I might have said as far as the association in this concept, supporting this project as defined for you, I would like to say that, as I read the numbers in this study, it comes out at about $18 to $20 a cow.

Now, I did not intend to talk numbers, but if that study and those numbers come close plus distribution in the pasture taps that are referred to, I think you could see the enthusiasm that the cattlemen in this room would have for the possibility of that kind of project compared to the kinds of costs that they have testified to now in both cattle economics and in social and standard of living costs.

So, you know, while I cannot verify that $18 to $20 pasture tap that is in this report, I am suggesting to you that that is an attraction and that I would hope we can form a partnership through the authorization of this bill to the State, as we referred to, and to these folks who are certainly willing to do their share and make this project a reality.

Thank you very much.

Senator WALLOP. Thank you.

Mr. Means?

STATEMENT OF FRANK MEANS, TRIBAL COUNSEL AND CHAIRMAN, ECONOMIC DEVELOPMENT COMMISSION, OGLALA SIOUX TRIBE

Mr. MEANS. Honorable Senators, I would like to thank you for giving me this opportunity to speak on behalf of the Tribe. My name is Frank Means and I am a member of the Oglala Sioux Tribal Council.

The Pine Ridge Indian Reservation is an area encompassing 2,666,000 acres in the south central western sector of the State of South Dakota. It is the second largest reservation in the United States in acreage and population. Agriculture and cattle ranching have historically been the big employment and general environment within the reservation.

Within the reservation there are over 1.6 million acres designed for agricultural use such as wheat, barley, oats, alfalfa and grazing usage. Currently, there are over 31,000 head of cattle being grazed on approximately one million acres of land.

There are nine districts in the reservation and due to isolation and location, each has a specific need for water, domestic and other uses of water. The planning staff has prepared an overall development plan that will address the priorities of the entire tribal membership.

For these reasons, the Oglala Sioux Tribe requests that it be included as an eligible recipient of Senate Bill No. 1471, the Lyman-Jones and West River Rural Water System.

Thank you.

Senator WALLOP. Thank you, Mr. Means.

Mr. Woodsen or Mr. Miller?

STATEMENT OF ROBERT MILLER, EXECUTIVE DIRECTOR, SOUTH DAKOTA MUNICIPAL LEAGUE

Mr. MILLER. Thank you.

My name is Bob Miller and I am the Executive Director of the South Dakota Municipal League. The League was formed back in 1934 and it is set up as a nonprofit corporation for the sole purpose of improvement of life within the municipalities.

After extensive public hearings, the League a number of years ago developed a set of criteria that it uses to evaluate proposed utility and water projects. Following that we developed a set of recommendations.

The League recommends that any water transmission facility contructed in South Dakota take into account our future water needs and those of local government and that the local land use policies and plans be considered prior to construction.

The systems that you have in front of you today have been designed to be cost effective for the consumer through the use of the existing facilities and the coordination of municipal and rural needs by combining the needs of both the people who live in town and the rural residents. An efficient system has been developed and, of course, we would ask you then to relay that back to your fellow members of Congress.

I think the simplest way perhaps to get this legislation passed in Washington would be for each of you to take a glass of the local water back to Washington and pass it around the Senate chambers and let everyone see and taste what these people have been experiencing all of their lives.

Thank you, Mr. Chairman.

Senator WALLOP. Now with television we may be able to do that. They will never believe it in iced tea, though, or something better.

Mr. Reed?

STATEMENT OF STEVE REED, MANAGER, WEST CENTRAL ELECTRIC COOPERATIVE

Mr. REED. Thank you, Senators Wallop and Abdnor. My name is Steve Reed. I am the Manager of West Central Electric in Murdo, South Dakota, and on behalf of the Cooperative, I would like to give testimony in support of Senate Bill 1471.

The agricultural industry in South Dakota and other agricultural-oriented States has benefited from the development of rural electrification. It has made farming and ranching much more efficient and has greatly increased farm productivity. Our farmers and ranchers in this area have made maximum use of rural electrification.

However, they are faced with another major problem. This area of South Dakota lacks a stable, dependable water supply of good quality. We are forced to rely on stock dams and very deep artesian wells. The water quality is not only poor, but can be and usually is very expensive to obtain.

In addition to the amortization costs and maintenance costs of the wells, West Central's records show that we provide power to over 560 wells in our service territory at an average of over $17 per month per well. In those areas dams and deep wells are the only sources available to us.

The water quality and dependability from stock dams is also very poor and the deep artesian wells produce a water situation in some areas that is unfit for human consumption. With a continued lack of good quality water in our area, we shall see a continued movement away from the farms and ranches.

The agricultural industry in our area is very important, but there is another source of income which we rely heavily on and this is tourism. Good drinking water is essential to this part of our economy. Rural water systems have proven to be an efficient and cost-effective means of providing a good quality of water to rural areas.

Senate Bill 1471 will provide an increased economic stability by providing a dependable high quality water to residents of this area. We ask for your support of Senate Bill 1471.

I thank you for your time.

Senator WALLOP. Thank you Mr. Reed.

Jim, do you have any questions?

Senator ABDNOR. No.

Senator WALLOP. Let me just say how much I appreciate you all coming down here. There are a variety of interests testifying on behalf of this proposal and Senator Abdnor and Senator Pressler. I especially appreciate yours, Gaye. You brought back a lot of memories for me, too. I used to think it was not a bad life, but I do not think I would want to go back to it.

Senator ABDNOR. You are not alone. I used to clean cisterns, too. They sometimes had mice in them. I do not know how they got in there, but it was even worse than the lizards.

Senator WALLOP. Well, now, there he is. His work is all indoors and no heavy lifting. I will tell you, it is pretty hard.

Thank you all very much.

Next we have a panel of municipal officers; Mayor Tom Raymond of Kadoka, and thank you on behalf of the committee for the use of this building; Mayor Mike West of Philip; the Municipal Finance Officer of Murdo, Lanny Iwan; Ms. Joan Renner, Municipal Finance Officer of Wall; and Mr. Ron McManus, President of the Town Board of Reliance; and Jerry Nemec of the City of Midland.

Mr. Raymond, thank you for your hospitality.

STATEMENT OF THOMAS E. RAYMOND, MAYOR, KADOKA, SD

Mayor RAYMOND. You are welcome, Senator Wallop.

My name is Tom Raymond, Mayor of the City of Kadoka. For the record I have submitted a written statement in support of Senate Bill 1471 and the development of rural water systems in the hope that we can provide quality water at reasonable costs to the rural areas of Western South Dakota.

Many of the things that I could say and some of the things I am going to say, I guess you have probably heard this afternoon. I will not dwell upon them, but the bottom line, I guess, is that one of the things that I feel that the people in this area feel is most important and one of the things the Government can do for its people is to ensure a good and adequate supply of quality water.

The City of Kadoka today presently secures its water from the two artesian wells, deep wells. The water comes out of the ground at about 130 degree Fahrenheit. It is of extremely high mineral content. That poses some serious problems for equipment. The mineral content and quality of water are very poor for consumption. Due to the extreme temperatures of the water, pumps frequently malfunction and need to be replaced.

Kadoka has an estimated population of 800-plus citizens. Over the four-year period beginning in 1982 through 1985 there was an improvement of the water tower, $380,000 approximately, of which Kadoka's share was $80,000. The rest was Federal assistance. Kadoka during that same time period also spent $73,750 in repair of its two wells.

Without going into further figures, the approximate average averaged out to about $120 a year for improvements and well repair for every man, woman and child in Kadoka. It is my contention and the contention of the City Council that this is too costly.

We are very interested in quality water at reasonable cost. Hopefully, Senate Bill 1471 and other similar legislation will ensure the development of water systems for Western South Dakota which will in turn do many of the things that people are speaking about this afternoon. The plan to bring Missouri River water to Western South Dakota has been pursued for many years. Let us now make it a reality.

Thank you for your time.

[The prepared statement of Mayor Raymond follows:]

City of Kadoka
POST OFFICE BOX 58
KADOKA, SOUTH DAKOTA 57543
"Gateway to the Badlands"

Monday, August 25, 1986

RE: Lyman-Jones Rural Water System
West River Rural Water System

A written statement in support of rural water systems and in support of United States Senate Bill S. 1471.

To whom it may concern:

I, Thomas E. Raymond, Mayor of the City of Kadoka, do hereby submit the following statement supporting S. 1471 and the development of rural water systems which would provide quality water at reasonable cost for the rural areas of western South Dakota.

Introduction

Having resided in Kadoka since November of 1977 and having served as a public official for all but a few months of that time I am well aware of the problems created for our rural areas by an inadequate supply of quality water. In my frequent visits with the residents of Kadoka and its surrounding area it has been repeatedly expressed to me that one of the most important things government could do for its people is to insure a good supply of quality water. Although I will address the issue of a lack of quality water as it affects the City of Kadoka I am well aware of the problems of water supply and poor quality faced by our country neighbors and the residents of area towns.

Source of Present Water Supply

The City of Kadoka presently secures its water from two artesion wells drilled deep into the Lakota formation. Our facilities consist of these two wells, treatment equipment, water storage reservoirs, and the accompanying distribution system. Our water storage reservoirs consist of one 60,000 gallon capacity and one 250,000 gallon capacity elevated towers.

Water Quality

The quality of the artesion water we pump from deep in the earth is questionable for purposes of everyday household and commercial use. This water, at between 85 and 90 degrees Fahrenheit, enters our system much too hot for consumption or normal use. This necessitates pumping the water into cooling towers before it can be stored and distributed.

The water has an extremely high mineral content which results in the water having a slight odor and more importantly results in the rapid corrosion of treatment equipment, water lines, and all types of fixtures. This water soon turns the sand in our treatment reservoirs from its normal sandy color to a reddish brown. Anyone who has visited our treatment facility and watched our treatment reservoirs being flushed can tell you that it was with a great deal of thought that they consumed their next drink of Kadoka water.

Fluoridation is not required due to the amount of natural fluoride found in the water. This is one of the few positive things

Water Quality(Con't.)

about the water. The water has continued to pass the regular chemical analysis as required by the state health department.

Problems with Present Water Supply

I quote breifly some exerts from minutes and transactions of the Kadoka City Council concerning our deep water wells -

"March 8, 1982 - McRae stated that Well #1 is not pumping to capacity and will require pulling for repairs in the very near future."

"June 13, 1983 - The bill to Great West Pump is for the emergency repair of Well #2. The pump quit on May 27th, Great West was called at approximately 9:45 A.M. and arrived at approximately 9:00 P.M. that evening, to start work. The exchange on the 50 HP - 6" motor 460V, 3 phase was $8,149.00."

"August 8, 1983 - The water tower is complete ---"

"July 1985 - Mr. Mayor, this is Councilman Weller. I am calling to inform you that the pump went out on Well #2 and we are experiencing a water shortage ---"

These are simply a few instances of the almost constant problems which we encounter with our deep water wells and with trying to make improvements.

Due to the extreme temperatures encountered in our deep water wells the pumps frequently malfunction and need to be replaced, seemingly on a yearly basis. Some employees of companies who have worked on our wells express surprise and disbelief that our pumps continue to function for as long as they due to tha etreme conditions under which theymust operate.

Kadoka has an estimated population of 800 which easily doubles

Problems with Present Water Supply(Con't.)

with the influx of tourists each summer. The tourist trade is a major source of economic livelihood for Kadoka. With the addition of another approximate 1000 people there is a significant and noticable strain on our water system due to the increase in consumption. In the event that the system would break down, a well would fail, or a major fire occur we would be and have been hard pressed to fulfill basic needs. If we have an extremely dry year we experience serious problems with normal summer concumption.

Records show that Kadoka used approximately 31,000,000 gallons of water in 1960. By 1975 usage had increased to approximately 56,000,000 gallons. A December 1978 West River Aqueduct Conceptual Feasibility Study estimated that Kadoka would need 302 Acre Feet of water in 1985 and 358 Acre Feet by the year 2000. In any event, with the steadily increasing demands for quality water Kadoka and other ruralareas cannot afford to finance improvements without federal assistance.

Inspection, repair, or replacement of our deep water wells has cost us an approximate average of $18,340 per year from 1982 through 1985.

1982	$39,361
1983	20,400
1985	13,589
Total	$73,350

The costs of repairing/replacing our wells and of a new water

Problems with Present Water Supply(Con't.)

tower average out to approximately $38,400 per year over a four yearperiod. This is Kadoka's share alone! Include the federal subsidy and the four year average jumps to $95,396 per year. Divide this by an estimated Kadoka population of 800 and it comes to approximately $120 per year for improvements and well repairs for every man, woman, and child in Kadoka!

Put very simply, the problem is like this - our present system is too costly for the quality of the water is produces.

Another issue which we have not and will not address, mainly because for the present we dare not think of the consequences, is what happens when and if our present well(s) go dry or there is a significant decrease in the amount of water pumped?

Benefits

Hopefully, S. 1471 and other similar legislation will ensure the development of water systems for western South Dakota which will in turn -

- provide water at a more economical cost;
- provide a relaible source of quality water for local areas plagued with chronic water problems;
- slow population loss;
- stimulate population growth and economic development;
- make quality water the norm rather than a dreamed for desire; and
- make quality water a reality rather than a promise to

Benefits(Con't.)

our children's children.

The plan to bring Missouri River water to western South Dakota has been pursued for many years, let us now make it a reality.

Respectfully submitted,

Thomas E Raymond

Thomas E. Raymond
Mayor
City of Kadoka

CC: File

Senator WALLOP. Thank you, Mayor Raymond.
Mayor West?

STATEMENT OF MIKE WEST, MAYOR, PHILIP, SD

Mayor WEST. Thank you, Senator Wallop, Senator Abdnor and Mr. Brown. I do not want to forget you.

My name is Mike West. I am the Mayor of Philip. I have been the Mayor of the City of Philip for approximately the last ten years. The single most serious problem that I have to deal with, being the Mayor of the City of Philips, has been water.

We have a couple of sources of water. One is a dam. The other one is a deep water well. Our dam has been declared by the Corps of Engineers to be in the high-risk category. We have a very high silt problem which has taken about half of the capacity of the dam because of silt. The lack of run-off into our dam because of the hundreds of dams that have been built in the last 50 years has hindered or run-off into the watershed.

The Madison Formation in which we have our dam or our well dug at is at about 4,010 feet. The radium content, radium 226, is about 150 times higher than Federal minimum standards.

Our water comes out at about 154 degrees and it has over 90 grains of hardness. Therefore, we must run our hot water into our dam which is a holding basin in order to cool it. After we process our water that comes in at approximately 90 grains hardness, we end up getting it to the consumer at about 65 grains hardness. Two twenty-six, as you know, is what hikes up our watch dial we have—it has been found to be linked with cancer of the marrow of the bone.

The results of this high content of mineral that we have from the Madison Formation results in high water costs as far as our production is concerned. The municipality spends a great deal of money on pipelines and storage tanks because of the serious corrosion problem. The buildup of minerals is very, very extreme.

The City of Philip now works in conjunction with the Bad River Rural Water System. I believe this is important, because as bad as our water is that I have been describing, it is still better than the alternative type water that the farmer and rancher uses in this area. Therefore, they buy it from us.

I also believe the solution to this is to bring a good quality potable water from the Missouri River into this area. The benefits would be immediate and such a pipeline would not only bring quality water to the people residing in the municipalities in Western South Dakota, but also the farmers and ranchers for they desperately need a good quality water.

If you need any further information, the City of Philip would be more than happy to provide you with any information or we would answer any questions that you may have. Meanwhile, we definitely support Senate Bill 1471.

Thank you.

Senator WALLOP. Thank you, Mayor West.
Mr. Iwan?

STATEMENT OF DON HIEB, CONSTABLE, MURDO, SD

Mr. HIEB. We have a slight substitution. My name is Don Hieb. I am a constable.

Senator WALLOP. What is your last name?

Mr. HIEB. Hieb. I am a constable for the City of Murdo, and we are appearing in support of Senate Bill 1471. I am representing Murdo in support of the Senate Bill 1471.

The source of our water supply is from a lake north of our town. It was built in 1938 which makes it rather old. The water is treated and filtered to our city. The quality of the water is fair because it is different in different years because it is from run-off.

In 1975, because of the drought, our lake fell to a dangerous low level. We were close to being out of water. We had no choice but to drill two deep artesian wells. These wells flowed into the lake. Unfortunately, the poor quality well water has ruined the quality of the water in the lake.

We have now plugged one of the wells in an attempt to improve the quality of our water. We can only hope that we do not have another drought. If we do, we are in trouble without a rural water system. We do not have any other cost-effective source and we will continue to pay high costs for poor quality water which does not meet any standard of quality.

We support Senate Bill 1471. Thank you.

Senator ABDNOR. Correct me if I am wrong, Don. When did you drill those wells, did you say? What year was it?

Mr. HIEB. 1975, I believe.

Senator ABDNOR. I do not remember the year it was. I was in the House when I had this SOS emergency call. We thought we were ready to lay pipe all the way from Pierre out to Murdo and pumps for an emergency to pump you a supply of water, as I remember.

Mr. HIEB. Yes. They checked into several different ways of getting it there and finally ended up drilling the wells.

Senator ABDNOR. I remember that getting pipe and laying it on top of the ground all the way from Pierre, about 60 miles away, was given a lot of thought.

Senator WALLOP. Ms. Renner is not here. Is somebody here from Wall? Mr. McManus?

STATEMENT OF RON McMANUS, PRESIDENT, TOWN BOARD RELIANCE, SD

Mr. MCMANUS. Mr. Chairman, I represent about 200 people in our town and our main problem is with corrosion and health risks to the water we use and that is the main reason for getting a better water supply.

Some of the examples of the problems we have had with it is we put in a four-inch main and six-inch main here about six years ago and here last summer it was plugged up and you could not run a pencil thickness through it with the corrosion of magnesium and rust.

We flush our mains about once a month and we get a slurry that comes out of each one of the hydrants so that it will pass through the water tester of the State.

We dug this well in about 1978 for $30,000. Since then we have stuck over $20,000 in pumping, just in pumps. That does not take care of the mains or anything. All the people in the town have to have a water softener and mineral filter besides and that is at a cost of about two or $3,000 per resident.

Then the salt content is too high and a lot of them have high blood pressure. They have to have it distilled to take salt out of the water so that is one of the main reasons we would like to have a better source of water.

It is not just limited to the town. All the surrounding farmers in the area are plagued with the same type of problem. Every place where the water is not very good, like ours is not, the housing and the people do not move in. You do not get a flow of people wanting to move into your place.

I am sure it would help develop all these smaller communities. Thank you.

Senator WALLOP. Thank you.

Mr. Nemec?

STATEMENT OF JERRY NEMEC, MAYOR, MIDLAND, SD

Mayor NEMEC. My name is Jerry Nemec and I am the Mayor of Midland, South Dakota. We came here to give testimony in support of the Senate Bill 1471, Lyman-Jones and West River Rural Water System of South Dakota.

I will just give you a brief rundown. On behalf of the Town of Midland, I see a great need for a stable water supply, the first reason being the cost of digging deep wells of approximately the 3,500-foot range. The town dug its first well around 1960 for around 40 to 45,000. It lasted until about 1970 at which time they dug another one at the approximate cost of 120,000.

I understand a similar well today, cased the same way the last one was, would cost over 200,000. I feel strongly that Midland could not continue to use this type of well water if another well had to be dug because the cost would be too expensive.

Also, there is a second reason, being the continued treatment and the removal of radium. This would be eliminated if we had a good supply of water. I feel it would be in the best interests of the Town of Midland and the rural area if a workable finance plan could be worked out to proceed with a rural water system.

Thank you.

[The prepared statement of Mayor Nemec follows:]

Before The
Senate Subcommittee on Water & Power

Lipman, Jones &
West Bijou Rural
Water System of S. Dak.
(Senate Bill 1471)

Testimony of
Jenny J. Nemec

My name is Jenny J. Nemec, Midland, South Dakota, and I am mayor of the town of Midland and a farmer. I offer the following testimony in support of the Lipman, Jones & West Bijou Rural Water System.

On behalf of the town of Midland, I see a great need for a good, stable water supply. The first reason being the cost of digging deep wells (approx. 350 00 ft.). The town dug its first well about 1960 for around $40,000.00 - $45,000.00, it lasted till about 1970, at which time they dug another well at an approximate cost of $120,000.00. I understand a similiar well today, cased the same way the last one was, would cost over $200,000.00. I feel strongly that Midland could not continue to use this type

of well water, if another well had to be dug, as the cost would be to expensive. Also, there is a second reason, being the continual treatment of radium removal which would be eliminated.

I feel it would be in the best interest of the town of Midland and rural area if a workable finance plan could be worked out to proceed with the rural water system.

Jerry J. Renec

Senator WALLOP. Thank you, Mr. Nemec. Jim, do you have any questions?

Senator ABDNOR. No.

Senator WALLOP. Mr. McManus, when you say you flush your mains once a month—this has nothing to do with the Senate, I am just interested—what do you flush them with and do the people turn off everything and——

Mr. MCMANUS. We open up a fire hydrant and let off that water pressure in the mains. That is where you are settling out, it settles out.

Senator WALLOP. You do not have a chemical flush or anything like that?

Mr. MCMANUS. No, no, just a pressure flush.

Senator WALLOP. Thank you all very much. Those were all interesting tales of difficult times in trying to deliver services to your citizens.

The next panel is Mr. Ken Halligan, a rancher from Draper; Mr. Houston Rose, a rancher from Haynes; Mr. Johnny Daum, former member of the West River Conservacy; and Mr. Paul Jensen, a rancher from Wall.

Mr. Halligan?

STATEMENT OF KEN HALLIGAN, RANCHER, DRAPER, SD

Mr. HALLIGAN. Mr. Chairman and members of the committee, I have been involved in the cattle business all of my life and in that time I guess I have spent more money on water than I have spent on feed. It has always been one of our biggest expenses.

One of the better programs, I think, we have had was after the thirties when we had a cost share for building dams and construction of wells, but we have used up all the sites. It is silted full and we have no other place to contruct them. The artesian basins are dipping or dropping down and the cost of drilling new wells is prohibitive.

We urge the support and passage of Senate Bill 1471. We need this project for financial stability. We have no known option available to replace the existing water systems as they fail. At best, these systems we have are not quality water.

I will give a little example of a well I have. This well is 2,180 feet deep and I have 12 miles of pipeline on it. The level is dropping and it will need to be replaced in the near future at a cost of $35,000, with interest at ten percent. This makes the cost of the interest about $300 a month which is a prohibitive cost for livestock.

With this, I will stop.

[The prepared statement of Mr. Halligan follows:]

Lyman Jones - West River
Mr Chairman and Member of the Committe

I have been involved in the cattle business all of my life. In that time I have spent, and seen more money spent, on water than feed.

One of the best programs we have had in this area is the cost share for water development. We built dams and constructed wells, but we have used up all the sites for dams and they are silted full and have washed out with spring run off.

ROCHE
BOVATEC
The Growing Difference...
RCD 6179A

The artesian basin is dropping and cost of drilling new wells is prohibitive.

We winter our cattle on the White River. This can be very hazardous because of the quicksand, where many cattle perish If good clean water is furnished in a tank cattle don't go into these bog holes and quicksand.

I urge the support and passage of Senate Bill 1471.

We need this project for the financial stability it would afford. If we are denied this source of finance we have no known option available to replace the existing

ROCHE
BOVATEC
The Growing Difference...

water systems as they fail. At best these systems we have are non-quality water.

Ken Halligan
Box 77
Draper S. Dak

ROCHE
BOVATEC
The Growing Difference...

With respect to our ability to help pay for the project, we have established water rates that are intended to repay a significant part of the cost. The amount that we can pay will depend on the terms and interest rate.

We are now paying a very high cost for water. I have a drill 2,180 ft deep. That will need to be replaced in the near future. the cost of this will cost be $35000 the int at 10% makes this cost $300 per month

Senator WALLOP. Thank you.
Houston Rose?

STATEMENT OF HOUSTON ROSE, RANCHER, HAYES, SD

Mr. ROSE. Thank you, Mr. Chairman.

I have a couple of pictures I would like to have you fellows look at.

Senator WALLOP. Thank you.

Mr. ROSE. Mr. Chairman, Senator Abdnor and Mr. Russ Brown, I am Houston Rose, a farmer and rancher from Stanley County. My boys and I operate a farm and ranch northeast of Hayes, South Dakota. I have been operating in this area for approximately 38 years and have experienced many of the problems that are associated with the area.

I have also been working to get a rural water system in the area for 20 years or better by serving on several different electric rural boards and on the State level.

There are so many different rural water problems in the area that a book could be written about them. Therefore, I am going to concentrate on only two or three that I feel are pertinent and know about myself.

The first was a rather minor problem, but one that affects a lot of people west of the river who get their household water from a dam. About this time of year, the moss gets pretty bad in dams and begins to get sucked into lines in the water systems.

This happened to my son who pumps water out of Hayes Lakes for his house. He says he was very busy last week. He failed to resolve the problem. So, I have a very recent experience. It took me about two days of working and about $100 worth of expense to get the water going again. It would have been real nice to have turned on a rural water valve.

The second problem I know of is a little more major and more expensive to stop. It has to do with the artesian wells. A lot of farms and ranches west of the river have artesian wells on their place as a major source of water for their livestock and their homes.

I was speaking about this meeting with Vern Stoesher and he told me he was having problems with his wells. It seems the water is leaking through his well pipe and he is losing pressure as well as his flow. One well drilling firm estimated it will cost him about $10,000 to put new pipe in his well.

If he could turn a valve on a rural water sytem, he could pay a monthly bill of $150 or $200 for a long time before spending that kind of money. He could also have better quality water with no corrosion.

Now I would like to talk a little bit about our own water problems on our own farm and ranch. We have an artesian well on our place as well as dams for our livestock and household. The artesian well serves our cattle by pipeline running through the pastures. We have 15 to 20 miles of this pipeline and it runs through pretty rough and hilly country.

We try to have backup dams at each pasture in case something happens to the pipeline or the well with loss or break in the line

because of the shape of the earth and washing of the gullies that the pipeline crosses. Sometimes because of this, we cannot have a dam to take care of the water the cattle need.

Right now if something happened to our artesian well, we would be in a very difficult situation. We have had a lot of very heavy rainfall this spring, as you know. We do not have one single dam that the spillway is not cut badly and the water levels way down or completely washed out. We estimate we would have to move about 30,000 or 40,000 cubic yards of dirt to get these dams shaped back up.

At the current rate of around 75 cents a yard, that could cost us $25,000 to $30,000 to have them fixed. If our artesian wells fail, as our neighbor's did, we would have to sell about 1,000 head of livestock whether we liked the market price or not.

It would be nice to turn a rural water valve in case something happened to our well. This well also serves a couple of our neighbors. Recently one of my neighbors retired and he was going to move away. I asked him where he was going to move. He said, "Somewhere where I do not have to haul drinking water."

So, we really do have a wonderful country here and the only thing lacking is we do not have good drinking water out where we need it.

We would appreciate your help in getting that water piped out to meet our needs.

Thank you.

[The prepared statement of Mr. Rose follows:]

Mr. Chairman

STATMENT OF WATER PROBLEMS IN STANLEY CO. WEST RIVER S.D.

I AM HOUSTON ROSE, FARMER AND RANCHER FROM STANLEY CO. MY BOYS AND I OPERATE A FARM AND RANCH N.E. OF HAYES S.D. I HAVE BEEN OPERATING IN THIS AREA FOR APPROX. 38 YRS. AND HAVE EXPERIENCED MANY OF THE PROBLEMS THAT ARE ASSOCIATED WITH THE AREA. I HAVE ALSO BEEN WORKING TO GET RURAL WATER SYSTEM IN THE AREA FOR 20 YRS. OR BETTER BY SERVING ON SEVERAL DIFFERENT ELECTED RURAL WATER BOARDS AND ON THE STATE LEVEL.

THERE ARE SO MANY DIFFERENT WATER PROBLEMS IN THE AREA THAT A BOOKCOULD BE WRITTEN ABOUT THEM. THEREFORE I AM GOING TO CONCENTRATE ON ONLY 2OR 3 THAT I FEEL IS PERTINENT AND I KNOW ABOUT MYSELF.

THE FIRST IS A RATHER MINOR PROBLEM, BUT ONE THAT AFFECTS A LOT OF PEOPLE WEST OF THE RIVER, WHO GET THEIR HOUSEHOLD WATER FROM A DAM. ABOUT THIS TIME OF YEAR THE MUDS GETS PRETTY BAD IN DAMS AND BEGINS TO PLUG THE SUCTION LINES IN WATER SYSTEMS. THIS HAPPENED TO MY SON, BILL, WHO PUMPS WATER OUT OF THE HAYES LAKE FOR HIS HOUSE. SINCE HE WAS VERY BUSY LAST WEEK, IT FELL TO ME TOSOLVE THE PROBLEM, SO I HAVE A VERY [illegible] IT TOOK [illegible] DAYS OF WORK AND ABOUT$200.00 IN EXPENSE TO GET THE PROBLEM SOLVED AND THE WATER GOING AGAIN. IT WOULD HAVE BEEN REAL NICE TO TURN A RURAL WATER SYSTEM VALVE ON AND CURE THE PROBLEM FOR GOOD.

THE SECOND WATER PROBLEM THAT I KNOW OF IS A LITTLE MORE MAJOR AND EXPENSIVE TO SOLVE. IT HAS TO DO WITH ARTESIAN WELLS. A LOT OF FARMS AND RANCHES WEST OF THE RIVER HAVE ARTESIAN WELLS ON THIER PLACE, AS A MAJOR SOURCE OF WATER FOR THIER LIVESTOCK AND THIER HOMES. I WAS VISITING WITH ONE OF MY NEIGHBORS, BERNARD STOESSER, ABOUT THIS MEETING, AND HE TOLD ME HE WAS HAVING PROBLEMS WITH HIS WELL. IT SEEMS THE WATER HAS EATEN THROUGH HIS WELL PIPE AND HE IS LOOSING HIS PRESSURE, AS WELL AS HIS FLOW. One Well Driller's Estimate IT WILL COST HIM ABOUT$10,000 TO PUT NEW PIPE IN HIS WELL. IF HE COULD TURN A VALVE ON A RURAL WATER SYSTEM, HE COULD PAY A MONTHLY WATER BILL OF 150 TO $200.00 FOR A LONG TIME BEFORE SPENDING THAT KIND OF MONEY. HE WOULD HAVE BETTER WATER AND NO CORROSION WITH RURAL WATER.

I WOULD LIKE TO TALK A LITTLE BIT NOW ABOUT OUR OWN WATER PROBLEMS ON OUR FARM AND RANCH. WE HAVE AN ARTESIAN WELL ON OUR PLACE, AS WELL AS DAMS FOR OUR LIVESTOCK AND HOUSEHOLD. THE ARTESIAN WELL SERVES OUR CATTLE BY A PIPE LINE RUNNING THROUGH THE PASTURES. WE HAVE 15 OR 20 MILES OFTHIS PIPELINE AND IT RUNS THROUGH SOME PRETTY ROUGH AND HILLY COUNTRY. WE TRY TO HAVE BACK UP DAMS IN EACH PASTURE, IN CASE SOMETHING HAPPENS TO THE PIPELINE OR THE WELL. WE HAVE LOTS OF BREAKS IN THE LINE BECAUSE OF THE SHIFTING OF THE EARTH AND THE WASHING OF GULLEYS THAT THE PIPELINE CROSSES. SOMETIMES BECAUSE OF THIS, WE ONLY HAVE A DAM TO TAKE CARE OF THE CATTLE WATER NEEDS. RIGHT NOW, IF SOMETHING HAPPENED TO OUR ARTESIAN WELL, WE WOULD BE IN A VERY DIFFICULT SITUATION. WE HAVE HAD ALOT OF HE YRAIN FALL

THIS SPRING, AND AS A RESULT WE DON'T HAVE A SINGLE DAM THAT THE SPILLWAY IS BADLY CUT, AND THE WATER LEVEL IS WAY DOWN OR HAS COMPLETELY WASHED OUT. WE ESTIMATE WE WOULD HAVE TO MOVE ABOUT 30 OR 40 THOUSAND CUBIC YARDS OF DIRT TO GET THE DAMS SHAPED BACK UP. AT THE CURRENT RATE OF AROUND 75¢ A YARD THAT COULD COST $25 TO $30 THOUSAND TO HAVE THEM FIXED. IF OUR ARTESIAN WELL FAILED RIGHT NOW, AS OUR NEIGHBORS DID, WE WOULD HAVE TO SELL ABOUT ONE THOUSAND HEAD OF LIVESTOCK-WHEATER WE LIKED THE MARKET PRICE OR NOT. IT WOULD BE NICE TO TURN ON A RURAL WATER SYSTEM VALVE IN CASE SOMETHING HAPPENED TO OUR WELL. THIS WELL ALSO SERVES TWO OF OUR NEIGHBORS.

ONE OF THE FIRST THINGS I DID AFTER DRILLING OUR WELL WAS TO SEND A SAMPLE IN TO THE STATE TESTING LAB, FOR AN ANALYSIS OF WATER QUALITY. WE HAVE THE WATER PIPED IN TO OUR HOUSE TOO. THE REPORT CAME BACK, "NOT FIT FOR HUMAN CONSUMPTION. WE HAVE BEEN HAULING OUR DRINKING WATER FROM EITHER SPRINGS FROM ABOUT 20 MILES AWAY OR FROM PIERRE, ALL OF THESE YEARS. MY NEIGHBOR, ROY LATHEM, SOLD OUT AND WAS RETIRING A COUPLE OF YEARS AGO AND I ASK WHERE HE WAS GOIN TO MOVE TO. HIS ANSWER WAS, SOMEWHERE I DON'T HAVE TO HAUL DRINKING WATER. WE REALLY HAVE A WONDERFUL COUNTRY HERE AND WE HAVE PLENTY OF GOOD DRINKING WATER TOO. THE PROBLEM OF THE GOOD DRINKING WATER IS THAT IT IS ALL OVER IN THE LANDS OF THE MISSOURI RIVER, AND NOT WHERE WE [illegible].

[illegible] FROM DUBOIS, SHINTON, WYOMING OR WHERE EVER WILL HELP US GET IT WHERE IT IS NEEDED. THANK YOU.

Senator WALLOP. Thank you, Mr. Rose.
Mr. Daums?

STATEMENT OF JOHNNY DAUMS, FORMER BOARD MEMBER, WEST RIVER CONSERVANCY SUBDISTRICT

Mr. DAUMS. I am Johnny Daums and I have farmed and ranched all my life and I know the needs. I think the discussion we have had here today pretty well tells you the problems we have in this area. It is kind of like the good news and the bad news story.

The good news is we have got abundant water available that far away. There is no reason why we should not have it. The bad news is we just cannot get it. I think I really support Bill 1471. I think it will serve all of our rural area needs in the Murdo area. Water is a very serious problem because it is hard to get good coffee.

I sure hope we get to backing it. I appreciate the attention we have of the Senators here. Okay.

Senator WALLOP. Thank you, Mr. Daums.
Mr. Rhodes?

STATEMENT OF JERRY RHODES, FORMER MANAGER, WEST RIVER CONSERVANCY SUBDISTRICT

Mr. RHODES. Thank you.

I guess I could vouch for just about what everybody has said today. For three years I worked with the West River Conservancy Subdistrict and conducted several public meetings throughout the entire area from Wall to Reliance to White River. Throughout the meetings the people had the same story. The water quality is poor; the quantity is not there.

Sure, there are some areas where you will find some good water, but for every one good area, I can show you ten areas where the water quality is very poor and the one area north of Philip is so poor that the cattle will not even drink it. You can put the water on the hood of a pickup and it will sit there for several hours. Pretty soon you can peel the paint off that pickup. That is the kind of water that you will find in this particular region.

Also, Mayor West alluded to Bad River Rural Water System. I am a member of the Bad River Rural Water System. We obtain water from Philip. To us it is excellent water compared to what we were using.

We had two wells dug on my particular place. I have five sons and the water that we were using from these wells—they would have to take a bath in the same water because we did not have the quality. The water would come out of the faucet very black at some times so the 38 users on the Bad River Rural Water System, we appreciate it, the water in Philip, but we would like also some better quality water.

Also, I would like to mention that of all the public meetings that I did hold throughout this entire region, we did end up collecting approximate—raising $300,000 from the ranchers in the community. We also obtained a $200,000 loan from the State to do the studies.

I would also like to mention, too, that the Bureau was at two public meetings that we did offer these complete extensive studies

to and I do not believe that they did take them or do the research on these studies that should have been done.

Senator WALLOP. Thank you, Mr. Rhodes.

Mr. Jensen?

STATEMENT OF PAUL JENSEN, RANCHER, WALL, SD

Mr. JENSEN. What I came here to say today has all been said. I will submit what I had in writing for the record if you want it.

Senator WALLOP. By all means, yes.

[The prepared statement of Mr. Jensen follows:]

Jensen Ranch, Inc.

Jensen Road
Wall, South Dakota 57790

Paul Jensen

5 July, 1986

The Jensen Ranch is comprised of more than 7000 acres located East of The Cheyenne River and South of Interstate 90 at Wasta, South Dakota. We consider one of our main problems to be the lack of good water. Although we no longer have cattle on this Ranch after 80 years, we do rent out pasture to a neighbor for some 150 head. We could not support that many head in a dry year due mainly to water problems. This year, with rain, we could support many more head.

The long term problem of water here is due to several situations.

1. The dams in these river breaks after several years tend to either silt in or seep, or both. Most of our dams are in worstening shape, some are nearly unrepairable. All are getting worse.

2. The several wells that we do have are alkaline beyond use for anything but cattle water (where available). To use our well water on a garden will turn it white and kill the ground. The Epsom salt content is very high and seldom needed.

3. Wasta has very good water and we have for over 30 years hauled all water for domestic use from there. We have learned to be extremely conservative with water. This hauling costs about $10.00 per thousand gallons not counting our time to get it. Wasta is 14 miles round trip and it takes about one hour to load and unload each 1000 gallons. Prior to using Wasta water we either hauled from a well 1½ miles away with a stone boat or collected rain water into cisterns. The well 1½ miles away has a limited supply and is not the best water.

4. We have drilled dozens of wells over the years and have not found any suitable water supply for domestic use . The water that we have for other uses has not been shown to be treatable. In dry years we lose our garden and cannot carry as many cattle as we would like mostly due to lack of water not lack of grass.

A rural water system would be a wonderful thing for the Jensen Ranch if the taps could be put in the right places at a reasonable price and the system was dependable.

Paul Jensen

1-(605)-279-2222

Leonel Jensen PAGE 2

WELL WATER SAMPLE (SAMPLE NUMBER 403204)

STATION LOCATION : LATITUDE= 44 1° 47" ; LONGITUDE= 102 22° 55"

Paul Jensen
Jensen Ranch Inc.
WALL, S.D. 57790

WATER MEASUREMENTS		
TEMPERATURE (C)	=	+ 11.5
PH	=	7.1
M ALKALINITY (PPM)	=	268
TOTAL ALKALINITY (PPM)	=	252
CONDUCTIVITY (UMHOS/CM)	=	6830
SULFATE (PPM)	=	5420
CHLORIDE(PPM)	=	140

ELEMENT DETERMINATIONS (PPB)		
URANIUM	=	28.57
ARSENIC	= <	0.5
SELENIUM	=	0.5
SILVER	=	3
ALUMINUM	=	117
BORON	=	760
BARIUM	=	7
BERYLLIUM	= <	1
CALCIUM (PPM)	=	392.0
COBALT	=	3
CHROMIUM	=	5
COPPER	=	21
IRON	=	62
LITHIUM	=	754
MAGNESIUM(PPM)	=	573.1
MANGANESE	=	22
MOLYBDENUM	= <	4
SODIUM (PPM)	=	1348.5
NIOBIUM	= <	4
NICKEL	=	8
PHOSPHORUS	= <	40
SCANDIUM	=	1
THORIUM	=	22
TITANIUM	=	8
VANADIUM	= <	4
YTTRIUM	=	1
ZINC	=	203
ZIRCONIUM	=	3
POTASSIUM(PPM)	=	44.2
STRONTIUM	=	6734
SILICON (PPM)	=	3.6
37. CERIUM	=	36

* THESE VALUES CAN NOT BE USED AS AN INDEX OF DRINKING WATER QUALITY

PB MEANS PARTS PER BILLION
PM MEANS PARTS PER MILLION
CT MEANS PERCENT
MHOS/CM MEANS MICRO-MHOS PER CENTIMETER
MEANS LESS THAN

THIS REPORT WAS PREPARED AS AN ACCOUNT OF WORK SPONSORED BY THE UNITED STATES GOVERNMENT. NEITHER THE UNITED STATES NOR THE DEPARTMENT OF ENERGY, NOR ANY OF THEIR EMPLOYEES, NOR ANY OF THEIR CONTRACTORS, SUBCONTRACTORS, OR THEIR EMPLOYEES MAKES ANY WARRANTY, EXPRESS OR IMPLIED, OR ASSUMES ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS OR USEFULNESS OF ANY INFORMATION, APPARATUS, PRODUCT OR PROCESS DISCLOSED, OR REPRESENTS THAT ITS USE WOULD NOT INFRINGE PRIVATELY OWNED RIGHTS.

Mr. JENSEN. But I also brought some of my water from the well that we cannot drink. It is up behind you on the stage if you want to take it to Washington.

Senator WALLOP. I will let Jim do that. He will hold it up on the TV in the morning.

Mr. JENSEN. Jim, being from Kennebec, probably knows. The one that says Treetop is the good water. That is Wasta water, and I am from Wasta, which is about 60 miles. Wasta is an Indian name meaning good.

Senator WALLOP. Smells like apple juice.

Mr. JENSEN. Afraid not. We haul all our water from Wasta which is what you have got, Jim.

Senator WALLOP. Where do they get it?

Mr. JENSEN. It comes out of a spring on the hill above town and the Indians named it "miniwashtai" or water good. I suspect they did that because they had to travel clear from the Missouri River to Wasta to get any. But the other stuff, if you want to take it, fine. I would recommend you do not take a swallow of it.

Senator WALLOP. I will take your word for it.

Mr. JENSEN. It works wonders in some ways. The other thing I would like to submit is a sample of that water in a Treetop bottle. There are some 32 different elements including the radium that they were talking about. It is amazing the properties that are contained in that water. After reading it, I am sure you would not want to taste it.

Senator WALLOP. Maybe you ought to mine it.

Mr. JENSEN. So, what I had to say has already been said. This water from the Missouri River would certainly help us out. Also, I go along with what Doris Miner said about the stone bolt. I got in on that. I am still cleaning my own cistern, as Ms. Tollefson said, so we are still having to haul it. We would sure appreciate that good water.

Senator WALLOP. Thank you all. I guess that completes the list of witnesses. Also it completes the amount of time that Jim and I had available. I appreciate everybody having been kind enough to the others who wished to testify that they shortened their statements down so that everybody did have a chance.

I want to tell you that from my own personal perspective, I sure as hell understand the nature of your problem and appreciate the feeling that you have behind it. Everybody seems to notice we are seeking to balance the budget, but I have heard from Jim more than once on issues like this. I expect I will hear from him more than once again. You do have a point.

With the promises that have been made of the availability of water and the land that you have given up to the storage of water, it strikes me that you do have a point. I will sure be happy to work with Jim as he tries to make this legislation go through.

I would again say to the legislators that it would be helpful if we had representatives of your State government back there with Senator Abdnor and Senator Pressler. It does seem to do good. It does put the whole picture in perspective when the State begins to try to look after the needs of one area of it.

It is apparent that those needs are more than local, that they are state-wide. I think Jim has identified the state-wide need. I think it

is good for the whole econmy of South Dakota. I hope we can do something in your behalf. If I do not miss my guess, Jim will be trying to make us do that.

Jim, thank you for having me down here with these good folks.

Senator ABDNOR. I thank you. I just want to say how pleased and proud I am to see this huge turnout. Some of these people undoubtedly have come 100 miles or better in some cases.

Let the record show there are several hundred people here today who feel so strongly about this that they have to give it a priority, probably their major priority right now along with all the other financial problems they have. We have to have water. I guess I have expressed myself on how strongly I feel of the fact that we do have a commitment from the Federal Government that goes back to the early days of the water development of the dams on the Missouri River.

I hope that someday when your committees puts in any kind of cost-sharing programs, that they cary a provision like we have and that one from the Corps when the ability to pay does come up because there are times when costs are almost prohibitive in some areas and they have to have it, whether it is flood control or whether it is water supply or municipal water or agricultural, domestic water, so I think this was good.

But let me say another thing. I want the people in the audience to know that it is not very ofter you can always get the committee to come out. When you do, you have an advantage.

Had this hearing been held in Washington, I suppose it would have been allotted from 15 minutes to a half hour at the most while they rush through three or four other proposals before them. So, by coming out here and hearing firsthand how strongly you people feel and what the facts are, I know it is beneficial.

Poor old Russ Brown over here who has to carry a big load, I am glad he saw it firsthand. He has been here for several other water projects we have had hearings on and always been very willing to come out. I am sure you people probably bent his ear more than once over the past 24 hours since have had been around here and that is good. The whole hearing is good.

Above all, I want to thank Senator Wallop. I know he had an invitation to be a lot of other places on other committees that he serves on. He very definitely looks very carefully at the areas and visits those areas. So, I am thankful and grateful, Senator, that you did give me an opportunity to bring you out here.

I hounded him for days. He was one of the key members of the Tax Reform Conference Committee and he kept saying, "Well, Jim, we may be meeting all during this recess," so——

Senator WALLOP. Should have been.

Senator ABDNOR. So, I am glad to see that tax bill, whatever it is, come to an end so I can get him out here. Thank you very much.

Senator WALLOP. Thank you, Jim.

I want to add my thanks to Russ Brown.

Particularly I want to add my thanks to Diane Huse Hyde who has been transcribing all this for us this afternoon so the record is full and complete when it gets back to Washington for others to share it with.

Thank you all for coming.

The subcommittee stands adjourned.

[Whereupon, at 4 p.m., the hearing was adjourned.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

South Dakota House of Representatives

WILLIAM CERNY, JR.

Rt. 1, Box 2 • Burke, SD 57523

Home 775-2300 • Capitol 773-3851

COMMITTEES:

Commerce
Health & Welfare
Transportation
Rules Review
L.R.C. Executive Board

TO: Members of the Committee of Energy and Natural Resources

FROM: Representative William Cerny, Jr.

SUBJECT: West River/Lyman-Jones Rural Water System

The people of South Dakota are blessed with plenty of clean air and adequate 'elbow room' in comparison with residents of many states, especially those states on both sea coasts. We are blessed with a considerable amount of water flowing through our state, but the quality and quantity of available water in far too many areas of South Dakota are not adequate for its citizens and its livestock. The cost to bring water from the Missouri River is prohibitive for the people in this area.

The residents in the area comprised within the boundaries of the West River-Lyman-Jones Rural Water System have a proud heritage. Their families came to a barren land which is unfriendly in winter with bitter cold and heavy snows, and in the summer with blistering heat, droughts and tornadoes; but the people are solid individuals who handle the elements very well. They are as proud as their ancestors, and they would resist asking for assistance if it were possible to achieve one basic element that is so needed - adequate water for domestic and livestock needs - by their own endeavors. It is a pleasure to be an elected official of these people, the very type of people that were the founders of this nation.

As a member of the South Dakota Legislature, I know all too well the limited resources of our citizens, and I know the limited taxing capabilities of our sparsely populated state. I also am aware of the billions of dollars spent by the Federal Government, your tax dollars and ours, that go for mass transit systems in the cities; to help cities revamp their water mains even when those same cities have not charged their citizens for future improvements or even at times the actual costs of the water delivery systems; and for playgrounds and parks, items to make life a little better for the city dweller. We are only asking for some assistance in making our lives a little better, better by having decent water for drinking and for watering our animals. In fact, as cattle feeders, hog raisers and sheep growers, we are asking assistance to be able to provide the consumer in the city a better qulity of meat product.

Rural America is still a vital component of the United States, and adequate water supplies of quality and quantity are vital to Rural America. I urge your Committee's support of this project.

Wm Cerny Jr

August 21, 1986

The City of Murdo hereby enters its support of S. 1471.

Our source of water supply for our city is Lake Murdo, a dam and reservoir north of the city. This water is treated, filtered, and distributed throughout the city. The quality of drinking water was quite good for many years, as our water in the lake was runoff water collected from precipitation. We did not use any wells because of the poor quality of underground water in this area.

In 1975, because of a drought, our lake level fell to a dangerously low level, and we were close to being out of water. We had no choice but to drill two deep artesian wells. These wells flowed into Lake Murdo in an attempt to blend the bad well water with the better lake water, and to allow iron and other minerals to oxidize and settle out. Unfortunately the poor quality well water has ruined the quality of the water in the lake. We have now plugged one of these wells in an attempt to improve the quality of our water. We can only hope that we do not get another drought. If we do, it is back to the wells.

Murdo and its adjacent rural area need a good quality dependable water supply. The Lyman-Jones Rural Water System could provide that supply. If we don't get the rural water system we do not have any other cost effective source and this area will continue to fight our way through droughts which reduce our water supply, and we will continue to pay high costs for poor quality ground water which does not meet any standard of quality. There has to be a better answer, and in our opinion that is a rural water system with water being delivered from the Missouri River.

The City of Murdo requests your support of S. 1471.

Gene Beckwith, Mayor
City of Murdo, South Dakota

THE Missouri Breaks Chapter
NATIONAL AUDUBON SOCIETY
P.O. Box [illegible]
PIERRE, SOUTH DAKOTA 57501

A RESOLUTION OF THE MISSOURI BREAKS CHAPTER
OF THE
NATIONAL AUDUBON SOCIETY

Support For Construction
of the
Lyman-Jones Rural Water System
and the
West River Rural Water System

Adopted August 14, 1986

WHEREAS, existing water supplies in western South Dakota are limited and of poor quality; and

WHEREAS, the health of people residing in western South Dakota may be threatened by consumption of water from existing supplies; and

WHEREAS, the Lyman-Jones Rural Water System and the West River Rural Water System propose to construct a pipeline system to distribute water from the Missouri River to farms, ranches and towns in western South Dakota to alleviate the public health problems caused by poor quality water; and

WHEREAS, a pipeline delivery system is the least environmentally damaging method of transporting water from the Missouri River to farms, ranches and towns in western South Dakota; therefore

BE IT RESOLVED that the Missouri Breaks Chapter of the National Audubon Society supports construction of the Lyman-Jones Rural Water System and the West River Rural Water System provided that such construction (1) minimizes impacts to the environment, (2) takes into account landowners' concerns and justly compensates landowners who are crossed by system facilities, and (3) adequately mitigates any environmental impacts that do occur.

Geraldine D. Stoke

Geraldine D. Stoke
President, Missouri Breaks Chapter
National Audubon Society

POSITION OF THE MISSOURI BREAKS CHPATER, NATIONAL AUDUBON SOCIETY ON THE LYMAN-JONES RURAL WATER SYSTEM AND THE WEST RIVER RURAL WATER SYSTEM

The Missouri Breaks Chapter of the National Audubon Society supports construction of the Lyman-Jones Rural Water System and the West River Rural Water System (see attached resolution). We believe these two water delivery systems will alleviate a serious public health concern with little environmental ramification.

There is little argument that there is a need for an alternate source of water for western South Dakota ranches, farms and towns. Studies of the water quality of existing groundwater wells document a real cause for concern about long-term use of these sources of water by people and livestock. In most cases alternative sources of water, where they exist, are worse in quality than those presently tapped.

As an organization concerned with the environment, the Missouri Breaks Chapter opposes water projects that have large environmental impacts with little, if any, net benefit. However, environmental impacts of these projects will be small. A buried pipeline delivery system, such as that proposed by the two rural water systems, has far less of an impact on the environment than an open ditch system. The water intake structures already exist at the Oahe Dam so no new impacts due to construction of these structures will be felt. The amount of water to be taken from Lake Oahe will be minimal and should not impact Lake Oahe fisheries or downstream uses of water.

Of course, some environmental impacts will occur. We expect that further studies will identify routes of the pipelines and sites for the treatment and storage facilities that will minimize these impacts. We also expect that measures, such as erosion control and reseeding, will be adopted to mitigate environmental impacts that do occur.

The requested federal outlays for these projects may be resisted by those in Congress who have a legitimate interest in controlling the budget. We understand that concern. However, the Missouri Breaks Chapter asks that funding for the Lyman-Jones Rural Water System and the West River Rural Water System be approved, rather than funding Lake Andes-Wagner Irrigation Project, the CENDAK Irrigation Project, the James River Improvement Project, and the irrigation features of the Garrison Diversion Project. The Lyman-Jones and West River systems, like the successful WEB Project in northcentral South Dakota, have the full backing of all South Dakotans, while these other projects are opposed by environmentalists and farmers. Further the Lyman-Jones and West River systems will provide a tangible health benefit, while the other projects provide speculative economic benefits or in some cases no benefit at all.

RESPECTFULLY SUBMITTED,

Donald Pay
Conservation Chair
Missouri Breaks Chapter
National Audubon Society

Wall, South Dakota,57790
March 27, 1986

This letter is about water situation in Jackson, Haaken County, and eastern Pennington Counties. In this area, the lack of good water for domestic use has always been a problem. Shallow wells are noted for hardness,on our own ranch, tests generally at about 200 grains of hardness, or in a range of 20 grains above or below that figure. The semi-deep wells, that is from a 100 ft. depth to 200 ft. or more in depth, have fairly good water, but in most cases, is likely to go dry if the farmer or rancher expected to water as many as 100 head of livestock.

All through the thirties and forties the shortage of water was as serious as the lack of moisture for crops and pastures.

A great many people on the farms and ranches, found the only way to get good water for use around the house, was to have it hauled from a more fortunate neighbor's well. They used various methods of hauling and storing water.

I have been much concerned about the deep wells, we have in this area, I wonder if the aquifer these wells are drilled into at 3200 feet depth can furnish enough water to supply water for this area, and what lays in the big area between here and the Black Hills.

The City of Wall has dug four deep wells, one that cannot be used because the water level in Well No. 1, dug in 1961 has dropped below operating level at the pump.

A great many local farm and ranches get water at Wall, the water department, has installed a coin operated supply service so anyone wishing to fill a tank can get water at any time. This service is rather busy it shows that 380,000 gallons of water was sold in one season.

Enclosed is a chart showing the situation and answers many questions on the condition water supplies in this area. I heartily endorse HR3079 and S1471 bills.

Sincerely,

George O. Crouch

I am Harold McRae,Sec.and Treasure of the West River Rural Water Systems Inc.I was raised on a farm north of Kadoka.

Since then I worked in a Hardware and Implement store for three years,then manager of a Farmers Coop.Grain Elevator for eight years,then owner and manager of an implement buisness for fourteen years.For the next twelve years I spent most of my time on a ranch south of Kadoka.

During this time I was a director on the West Central Electric board.This cooperative covers nearly all of both the West River Rural Water System and the Lyman Jones water system.By living and working in these areas it has given me a very good idea of how uncertan and bad the water problem is in both these water systems is.
This can only get worse as the water table goes down and the dams get older.
I know of one well,a flowing well that the water will kill pigs.They use it in the winter time for yearling cattle. They cannot feed them feed with salt in it put out any free salt or they get sick.
We have a few shallow wells with good drinking water but the amount of water is usualy not enough.This is only in a few small areas.In dry years many of the shallow wells go dry. Most ranchers depend on dams for their livstock,even in the winter by cutting through the ice.The cattle do not gain or do very good on this ice cold water.
Maney of the dams were built 35 to 50 years ago,they are now becoming silted in to where they do not hold near as much water as they did.We have many dry years in this area and

when the dams get low the cattle get stuck and many dye if they are not found right away.

After I retired I was elected to the Kadoka city council I served for six years.During that time I was water commiss= ioner .I realy found out during that time what a problem the towns are having.
Kadoka has two deep wells 2750 feet deep.The water has to be pu pumped from about 300 feet.The water is hot aprox.130 degrees. It has to be run through cooling towers and filtered.

The life of a pump and moter is very short in this hot water. The cost of these pumps and moters and labor is very high. Over a period of years the cost has averaged in excess of $1000.00 per month just for repair and replacment .Due to the poor quality of the water the pipes do not last long . One year while I was on the council it cost over $24000.00. Both wells gave us problems that year.

We wer told at that time our no.1 well should only last another ten years.It was drilled in 1952.There is about 800 feet of bare pipe in the well,if it rust through the well is done.

Our water has disolvid solids of 1761,very high in sodium, magnesium,sulfate and iron.The filters take most of the iron out.Out of town people reapy complain about our water. Kadoka has 10 motels and a camp ground,this greatly increases our population during the summer.In the winter we have a large no.of studente and teachers also.

Harold M Rae

Resolution

WHEREAS, residents of western South Dakota have a critical need for an adequate supply of good quality water, and;

WHEREAS, the Lyman-Jones and West River Rural Water System presents a plan to provide and distribute a good quality drinking water to rural residents and to municipalities within their proposed service area, and;

WHEREAS, it is vital to the health and welfare of the citizens of these municipalities and rural residents that they have access to a good and dependable water supply;

NOW THEREFORE BE IT RESOLVED, that the Mayor and City Council of Presho, South Dakota hereby express their support for the West River and Lyman-Jones Rural Water System projects, and we hereby urge Congressional Authorization of the West River and Lyman-Jones Rural Water Systems as a Federal Project.

Adopted this 20 day of May, 1986

By: Bill Thornley Title: Mayor City of Presho

ATTEST: By: [illegible] Title: Notary

Dear Sirs,

This is a note to say I support the Jones-Lyman Water system. At present I have to haul all of my drinking water and my domestic water is high in alkaline, & is so high even a water softner can't really make it useable.

If another source of water was available I would make use of it

Very truly yours
Paul Patterson